REDACTED VERSION

TXD008012254

SITE ASSESSMENT REPORT
FOR
Odessa Drum Company
Odessa, Ector County, Texas

March 13, 1992

Prepared for:

J. Chris Petersen
Deputy Project Officer
Emergency Response Branch
EPA - REGION 6

Contract Number: 68-WO-0037

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Date: March 13, 1992

To: Greg Fife, OSC
EPA Region 6, Emergency Response Branch

Thru: J. Chris Petersen, DPO
EPA Region 6, Emergency Response Branch

Thru: Kishor Fruitwala, TATL
Region 6, Technical Assistance Team

From: Vera Henry
Region 6, Technical Assistance Team

Subj: Site Assessment Report: Odessa Drum Company
Odessa, Ector County, Texas
TDD# T06-9103-026
PAN# ETX1120SA

I. INTRODUCTION

On April 1, 1991, the United States Environmental Protection Agency - Emergency Response Branch (EPA - ERB) directed the Region 6 Technical Assistance Team (TAT) to conduct a site assessment, during removal activities at the Odessa Drum Company, in Odessa, Texas, to aid in Potential Responsible Party litigations. TAT was tasked to sample thirty 55-gallon drums that had company labels on them and arrange for the samples to be analyzed through the Contract Laboratory Program (CLP) for volatile and semi-volatile organic compounds, total metals, and the RCRA (Resource Conservation and Recovery Act) characteristics of corrosivity, ignitability and reactivity (Attachment L). In addition, TAT was directed to procure a subcontractor to install three groundwater monitoring wells, sample the wells and obtain a laboratory to analyze groundwater samples for priority pollutants.

From May 6 through 9, 1991, TAT members Gary Dry, Carol Geraghty and Vera Henry conducted the sampling mission to collect the thirty drum samples. From June 11 to 16, 1991, David Ehresmann, Vera Henry and Chris Quina monitored subcontractors during the installation of the monitoring wells. Groundwater samples were collected on June 17, 1991.

II. BACKGROUND

Odessa Drum Company is located at 2214 Alice Street, Odessa, Ector County, Texas (Attachment A). It encompasses approximately ten acres in Section 44, Township 1 South, Block 42. At the request of the EPA - ERB, TAT conducted a site assessment from April 24 to 27, 1990. Based on information obtained during this investigation, removal activities began on August 13, 1990. Site assessment findings, previous site history and information on facility operations can be found in the July 26, 1990, Site Assessment Report on Odessa Drum Company, under Technical Direction Document (TDD)# T06-9004-009A. For information on removal activities, see the Removal Report on Odessa Drum Company, under TDD# T06-9010-011.

III. ACTIONS TAKEN

A. Drum Sampling

The On - Scene Coordinator (OSC), Greg Fife, identified thirty drums to sample from the drums containing company labels. TAT located the drums and flagged each for easy identification during sampling (Photos 101, 102). The drums were opened and air monitoring was performed using the HNu Photoionizer with a 10.2 eV probe (Photo 104). All readings were below 5 ppm for volatile organic compounds. Volumes and descriptions of drum contents were recorded in the site logbook. Drums that did not contain enough wastes to sample (less than one-fifth of a drum) were exchanged for drums, with the same company label, containing ample wastes. Company information was recorded from the labels of all drums sampled (Attachment F). A detailed description of sampling strategy is provided in the Quality Assurance Sampling Plan (QASP) (Attachment I).

Quality assurance and quality control measures were conducted according to the QASP. Data validation was performed by EPA, Region 6, Houston Branch. Validation summaries are included with the data packages in Attachment L. Summaries of analytical results are listed below and in Tables 1-4.

1. RCRA Characteristics

All drum samples were analyzed for corrosivity, ignitability and reactivity. None of the samples exhibited any of these characteristics of hazardous wastes. Analytical results are provided in Attachment L.

2. Total Metals

Table 1 summarizes the analytical results for total metals. All metals analyzed for, are not listed. Only metals detected in the samples are included in the table. Detailed analytical results

TABLE 1

SUMMARY OF ANALYTICAL RESULTS FROM TOTAL METALS ANALYSIS
(Concentrations in ppm)

Drum Number	Sample Number	Aluminum	Antimony	Copper	Cobalt	Calcium	Chromium	Iron	Lead	Manganese	Nickel	Sodium	Zinc	Thallium	Mercury	Cadmium	Arsenic	Potassium	Selenium	Barium	Vanadium	Magnesium	Silver
4593	6264F-01M	314.00					36.00	3070.00	182.00	13.00	74.90	30500.00	387.00										
4620	6264F-02M	1.05		0.032		9.31	0.057	300.00	0.42	0.39			2.06			0.010		6.86					
4622	6264F-03M	0.237				5.96	0.012	26.20	0.036	0.12		8.55	0.19					14.40					
4882	6264F-04M					21.60	0.051	1330.00	0.73	4.88	0.13	186.00	0.58			0.28							
4647	6264F-05M	0.402				15.10	3.13	2.27	0.065	0.053	0.070		13.60	0.012									
4684	6264F-06M	4.56		0.17		43.40	0.13	848.00	0.23	4.49	0.15	0.43				0.021					0.051		
4891	6264F-07M	108.00		132.00	667.00		15.80	30900.00	48.90	192.00		9480.00	0.11		31.70								
4859	6264F-08M	1.24			10.60		0.016	26.00	0.110	0.27		44.10	0.106										
4499	6264F-09M							1.03	0.0057	0.015			0.082										
4507	6264F-10M					10.20		38.80	0.024	0.24	0.099	8.10	0.046										
4705	6264F-11M					5.84		0.73	0.0074				0.058										
4783	6264F-12M	0.28				20.50		39.20	0.026	0.31			0.67										
4837	6264F-13M						114.00	509.00		11.00	30.00		3400.00										
4453	6264F-14M	0.34		1.52		20.30	0.24	559.00	0.151	1.79	0.18	580.00	1.92		0.00069	0.013							
4518	6264F-15M			0.63		12.80	0.58	1870.00	0.090	9.00		763.00	0.60		0.00024		0.014	31.20	0.026				
4603	6264F-16M	3.17				9.44	0.16	352.00	0.44	10.60		5.65	4.19			0.083		9.28					
4252	6264F-17M					10.80		3.90	0.005	0.098			2.28									25.20	
4393	6264F-18M	0.61		0.55	0.053	7.13	0.34	725.00	0.27	8.64	0.73		0.12			0.017		9.93					
4199	6264F-19M	2.67		0.035		37.90	0.023	205.00	0.13	0.84		1520.00	0.24			0.0056							
4248	6264F-20M	0.54		0.10		26.10	0.025	4.42	0.10	0.15	0.21		0.78										
4117	6264F-21M	6.13		0.57		62.70	1.76	2740.00	0.34	5.91		877.00	1.41		0.004	0.078		12.90		0.31			
4431	6264F-22M					11.80		1.37	0.0042	0.26			0.11										
4408	6264F-23M					8.64		0.72		0.022			0.088										
4163	6264F-24M	258.00	0.090	11.30	.69	462.00	6.36	763.00	12.10	5.98	10.90	7130.00	40.60		0.00033	0.045		247.00		2.88	0.12	40.00	0.042
4340	6264F-25M	2.91		0.053		31.20	0.090	452.00	0.24	1.34	0.41	59.50	1.07			0.013		36.80				5.77	
4202	6264F-26M					10.70		85.00		0.80		10.80	0.13					14.50					
4138	6264F-27M	376.00					29.10	28100.00	111.00	105.00													
4158	6264F-28M	1070.00		45.30			41.00	8810.00	65.30	55.60	104.00	37800.00	306.00										
4354	6264F-29M			0.72		136.00	0.40	227.00	0.10	9.17	0.59	13.30	0.34			0.065							
4133	6264F-30M	3650.00		14.00		128000.00	63.20	19300.00	104.00	201.00	9.00	10700.00	166.00				5.70			227.00	16.50	1540.00	16.50

are provided in Attachment L.

3. Organic Compounds

Tables 2 and 3 summarize analytical results for volatile and semi-volatile organic compounds. Only volatile and semi-volatile compounds detected in the drum samples are included in the tables. During analysis, several unidentifiable compounds were found. The results are summarized in Table 4. Detailed analytical results are provided in Attachment L.

B. **Monitoring Well Installation**

The TAT procured an environmental driller, Winnek Companies Inc. of Tulsa, Oklahoma, to install three goundwater monitoring wells at the Odessa Drum Company site. TAT determined the monitoring well locations (Attachment B). The Winnek drilling crew obtained samples from well #1 with a split spoon sampler (Photos 108-110). The purpose of the sampler was to log the lithology of the subsurface and to inspect the samples for contamination (Attachment G). While drilling operations proceeded, TAT monitored with a HNu PI - 101 photoionizing detector and an Edmont Combustible Gas/Oxygen Monitor (Photo 111). No evidence of contamination was found. After boring approximately 13.5 feet the crew began to use a core barrel to retrieve samples. Coring was terminated at 59.5 feet on well #1. Monitoring well #2 was logged by observing drill cuttings. Well #3 was deemed similiar to wells #1 and #2 and was not logged after approximately ten feet.

Twenty feet of polyvinyl choride (PVC) well screen, with a two inch inner diameter and a 0.001 inch slot size, was placed in each well (Photo 126). The screen was connected to approximately 104 feet of riser PVC pipe section (Photo 127). The screen was packed with number 12-28 sand to prevent the screen from clogging (Photo 118). The sand pack extended approximately two to four feet above the screen. A bentonite seal was placed above the sand pack (Photo 119). Portland cement was used to grout the well from the bentonite plug to the ground surface (Photos 120, 121). A locking well protector was installed with a surrounding concrete pad and posts to prevent any damage to the well (Photos 128,129).

Upon completion of the wells, TAT took groundwater samples from each of the three wells and a sample from an existing well on site within the warehouse (Photo 132). Samples were sent to Ecology and Environment, Inc. Laboratory in Buffalo, New York, and analyzed for pollutants from the Priority Pollutants List. Table 5 lists all compounds, from the list, that were detected for each groundwater sample. Detailed analytical results are provided in Attachment M.

TABLE 2

SUMMARY OF ANALYTICAL RESULTS FROM VOLATILE ORGANIC COMPOUNDS ANALYSIS
(Concentrations in ppm)

DRUM#	SAMPLE#	acetone	chloroform	1,1-dichloro-ethene	1-butanone	2-hexanone	1,1-dichloro-ethane	1,2-dichloro-ethane	1,1,1-trichloro-ethane	carbon tetra-chloride	trichloro-ethene
4593	FK001										
4620	FK002										
4622	FK003		0.12							0.21	
4882	FK004										
4647	FK005									0.027	
4684	FK006								0.050		
4891	FK007								1.50		
4859	FK008	0.015	0.002							0.012	
4499	FK009	0.37	0.16		0.035		0.010			0.300	0.021
4507	FK010	0.25							0.011		
4705	FK011	0.038	0.12	0.005			0.007	0.002		0.20	0.017
4783	FK012	0.29	0.019						0.013	0.041	
4837	FK013										
4453	FK014										
4518	FK015										
4603	FK016	0.24	0.19							0.22	
4252	FK017									0.006	
4393	FK018										
4199	FK019		0.041				0.003			0.076	0.010
4248	FK020	0.59									
4117	FK021	0.94									
4431	FK022	3.50									
4408	FK023	1.20							0.058		
4163	FK024										
4340	FK025										
4202	FK026				1.30	0.063					
4138	FK027				35.00						
4158	FK028										
4354	FK029										
4133	FK030	1.20			5.00					0.36	

Table Continued on Next Page

TABLE 2 - Continued
(Concentrations in ppm)

DRUM#	SAMPLE#	1,1,2-trichchloro-ethane	4-methyl-2-pentanone	tetrachloro ethene	toluene	ethylbenzene	styrene	xylene	1,1,2,2-tetra-chloroethane	nonane	decane	propylbenzene
4593	FK001				23.00	33.00		190.00		68.00	18.00	33.00
4620	FK002								0.041			
4622	FK003	0.033										
4882	FK004											
4647	FK005											
4684	FK006											
4891	FK007						1.50	7.40				3.50
4859	FK008								0.001			
4499	FK009	0.048	0.017	0.015	0.002	0.047		0.46	0.042			
4507	FK010											
4705	FK011	0.022		0.007	0.002							
4783	FK012											
4837	FK013											
4453	FK014											
4518	FK015				30.00	67.00		840.00		69.00	32.00	380.00
4603	FK016								0.055			
4252	FK017	0.044							0.0060			
4393	FK018					3.00	78.00			6.00	11.00	90.00
4199	FK019	0.012		0.003								
4248	FK020											
4117	FK021											
4431	FK022											
4408	FK023		0.45									
4163	FK024				9.00	59.00		530.00		42.00	28.00	420.00
4340	FK025											
4202	FK026		3.70									
4138	FK027											
5158	FK028				10.00	76.00		620.00		50.00	25.00	310.00
4354	FK029		380.00		28.00							
4133	FK030											

Table Continued on Next Page

TABLE 2 - Continued
(Concentrations in ppm)

DRUM#	SAMPLE#	ethylcyclo-hexane	acetic acid methyl ester	1-cyclohexene-1-acetonitrile	2-propanol
4593	FK001	19.00			
4620	FK002				
4622	FK003				
4882	FK004			0.450	
4647	FK005				
4684	FK006				
4891	FK007				
4859	FK008				
4499	FK009				0.065
4507	FK010				
4705	FK011				
4783	FK012				
4837	FK013				
4453	FK014		4.93		
4518	FK015				
4603	FK016				
4252	FK017				
4393	FK018		8.5		
4199	FK019				
4248	FK020			0.15	
4117	FK021				
4431	FK022				
4408	FK023				
4163	FK024				
4340	FK025				
4202	FK026				1.10
4138	FK027				
5158	FK028				
4354	FK029				
4133	FK030				

TABLE 3

SUMMARY OF ANALYTICAL RESULTS FROM SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS
(Concentrations in ppm)

DRUM #	SAMPLE #	acenaphthylene	acenaphthene	dibenzofuran	fluorene	phenanthrene	fluoranthene	pyrene	anthracene	phenol	benzoic acid
4593	FK001				38.00	130.00				39.00	
4620	FK002										
4622	FK003	0.12	3.20	0.59	2.70	5.20	1.20	2.00	7.60		
4882	FK004										
4647	FK005										
4684	FK006										
4891	FK007					63.00					
4859	Fk008										
4499	FK009										
4507	FK010				0.100	0.14					
4705	FK011										
4783	FK012										
4837	FK013										
4453	FK014										
4518	FK015		19.00	9.00	17.00	26.00					
4603	FK016		0.98	0.30	1.20	2.60	0.100	0.22	0.33	0.32	
4252	FK017										
4393	FK018		14.00	21.00		23.00					
4199	FK019										
4248	FK020										
4117	FK021										
4431	FK022										0.18
4408	FK023									0.33	
4163	FK024										
4340	FK025										
4202	FK026										
4138	FK027										
4158	FK028				27.00	44.00					
4354	FK029										
4133	FK030										

Table Continued on Next Page

TABLE 3 - Continued
(Concentrations in ppm)

DRUM #	SAMPLE #	butylbenzylphthalate	2-methylnaphthalene	dimethylphthalate	di-n-octyl-phthalate	naphthalene	benzo(a)pyrene	1-methyl-naphthalene
4593	FK001		250.00			110.00		
4620	FK002							
4622	FK003							
4882	FK004							
4647	FK005							
4684	FK006							
4891	FK007							
4859	Fk008							
4499	FK009							
4507	FK010							
4705	FK011							
4783	FK012	0.22						
4837	FK013							
4453	FK014							
4518	FK015		91.00			56.00		64.00
4603	FK016		0.56					
4252	FK017							
4393	FK018		160.00			80.00		88.00
4199	FK019							
4248	FK020							
4117	FK021			0.38	0.17		0.22	
4431	FK022			0.29				
4408	FK023							
4163	FK024		480.00			290.00		68.00
4340	FK025							
4202	FK026							
4138	FK027							
4158	FK028		540.00			310.00		80.00
4354	FK029							
4133	FK030							

Table Continued on Next Page

TABLE 3 - Continued
(Concentrations in ppm)

DRUM #	SAMPLE #	4-methylphenol	benzyl alcohol	1-phenyl-1, 2-propanedione	2,4-dimethylphenol	bis(2-ethylhexyl) phthalate	1-chlorododecane	dimethylnaphthalene
4593	FK001	85.00			65.00			150.00
4620	FK002							2.70→ 5.30
4622	FK003							
4882	FK004							
4647	FK005		0.19					
4684	FK006						13.00	
4891	FK007							
4859	FK008							
4499	FK009							
4507	FK010							
4705	FK011							
4783	FK012		1.700					
4837	FK013							
4453	FK014							
4518	FK015							24.00→ 56.00
4603	FK016							
4252	FK017							
4393	FK018							36.00→ 92.00
4199	FK019							
4248	FK020							
4117	FK021							
4431	FK022							
4408	FK023							
4163	FK024							400.00
4340	FK025							
4202	FK026							
4138	FK027			26.00				
4158	FK028							84.00→ 180.00
4354	FK029							
4133	FK030					12.00		8.00

Table Continued on Next Page

TABLE 3 - Continued
(Concentrations in ppm)

DRUM #	SAMPLE #	ethylnaphthalene	dimethylbiphenyl	trimethylnaphthalene	chloromethylbenzene	4-hydroxy-4-methyl 2-pentanone	methyl flourene	4-morpholine ethanol
4593	FK001			330.00				
4620	FK002							
4622	FK003	2.60	2.00→ 4.70	3.50→ 4.90			2.40 →3.60	
4882	FK004							
4647	FK005				8.50	5.10		0.61
4684	FK006					5.60		
4891	FK007						70.00→ 1500.00	
4859	Fk008					6.30		
4499	FK009							
4507	FK010							
4705	FK011							
4783	FK012				6.30			
4837	FK013							8.10→ 71.00
4453	FK014							
4518	FK015	20.00→ 22.00						
4603	FK016					6.40		
4252	FK017							
4393	FK018	32.00→ 40.00		28.00				
4100	FK019					6.40		
4248	FK020							
4117	FK021							
4431	FK022					0.58		
4408	FK023					0.63		
4163	FK024							
4340	FK025							
4202	FK026							
4138	FK027							
4158	FK028	84.00		92.00				
4354	FK029							
4133	FK030			8.00				

Table Continued on Next Page

TABLE 3 - Continued
(Concentrations in ppm)

DRUM #	SAMPLE #	2-methyl-2-4-pentanediol	9-octadecanol	1-ethenyl-4-methoxy benzene	bromomethyl benzene	n,n-dimethylbenzenemethanamine	4,7-methano-1H-indene	1-chlorotetradecane	paraldehyde
4593	FK001								
4620	FK002								
4622	FK003								
4882	FK004						1.70		
4647	FK005		0.37	0.053	0.53	0.58			
4684	FK006							8.50	
4891	FK007								
4859	Fk008								
4499	FK009								
4507	FK010								0.42
4705	FK011								
4783	FK012								
4837	FK013								
4453	FK014								
4518	FK015								
4603	FK016								
4252	FK017								
4393	FK018								
4100	FK019								
4248	FK020								
4117	FK021								
4431	FK022								
4408	FK023								
4163	FK024								
4340	FK025								
4202	FK026	840.00							
4138	FK027								
4158	FK028	44.00							
4354	FK029								
4133	FK030								

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TABLE 3 - Continued
(Concentrations in ppm)

DRUM #	SAMPLE #	hexadaconoic acid	octadecanoic acid	9-octdecenamide	dimethyl pyridine	ethyl pyridine	trimethyl pyridine	ethanamine	1-chloro-2-propanol	2,2,4-trimethyl -1,3-pentanediol	octanoi acid
4593	FK001										
4620	FK002										
4622	FK003										
4882	FK004										
4647	FK005										
4684	FK006										
4891	FK007										
4859	Fk008										
4499	FK009										
4507	FK010	0.73	0.60	3.20							
4705	FK010										
4783	FK012				1.50→6.70	2.20	3.20	1.50			
4837	FK013								12.00		
4453	FK014										
4518	FK015										
4603	FK016										
4252	FK017										
4393	FK018										
4100	FK019										
4248	FK020										
4117	FK021										
4431	FK022									0.46	0.59
4408	FK023										
4163	FK024										
4340	FK025										
4202	FK026										
4138	FK027										
4158	FK028										
4354	FK029										
4133	FK030										

Table Continued on Next Page

TABLE 3 - Continued
(Concentrations in ppm)

DRUM #	SAMPLE #	n-methylbenzenemethanol	triethylene glycol	2-ethyl-1, 3-hexanediol	methyl-7-octadecanoic acid	4-acetyl morpholine
4593	FK001					
4620	FK002					
4622	FK003					
4882	FK004					
4647	FK005					
4684	FK006					
4891	FK007					
4859	Fk008					
4499	FK009					
4507	FK010					
4705	FK011					
4783	FK012	2.50				
4837	FK013		11.00		16.00	13.00
4453	FK014					
4518	FK015					
4603	FK016					
4252	FK017					
4393	FK018					
4100	FK019					
4248	FK020					
4117	FK021					
4431	FK022			3.90		
4408	FK023					
4163	FK024					
4340	FK025					
4202	FK026					
4138	FK027					
4158	FK028					
4354	FK029					
4133	FK030					

TABLE 4

SUMMARY OF ANALYTICAL RESULTS FOR UNIDENTIFIABLE COMPOUNDS
(Concentrations in ppm)

DRUM #	SAMPLE #	unknown	unknown hydrocarbon	cyclo alkane	alkyl benzene	unknown alchohol	paraldehye (isomer)	unknown acid	unknown aromatic	cyclic hydrocarbon
4593	FK001	140.00→880.00	18.00→55.00	23.00	14.00→120.00				160.00→380.00	
4620	FK002	24.00→52.00	190.00		9.00→14.00				20.00→340.00	
4622	FK003	1.40→3.20	2.20							
4882	FK004	0.15→3.70								
4647	FK005	0.51→4.30								
4684	FK006	2.40→11.00	7.20							
4891	FK007					270.00→620.00				
4859	FK008	0.45								
4499	FK009	0.011								
4507	FK010	0.33→1.20					0.680→0.820	1.60		
4705	FK011	0.58→5.70								
4783	FK012	1.30→3.70								
4837	FK013	6.60→14.00								
4453	FK014									
4518	FK015	18.00	12.00→52.00	48.00→1600.00						
4603	FK016	1.70→3.50	3.60 →6.30							
4252	FK017	39.00→71.00	60.00							
4393	FK018		11.00→80.00	18.00→320.00					28.00	
4199	FK019	0.50→1.10								
4248	FK020	8.00→96.00	6.00→28.00						8.00	
4117	FK021	2.00→40.00	2.30 →21.00							
4431	FK022	0.36→9.20						0.48		
4408	FK023	0.66→1.20								
4163	FK024	52.00→220.00	18.00→48.00	120.00→1200.00					40.00→130.00	
4340	FK025	4.00→15.00	8.50							
4202	FK026									
4138	FK027	8.00→100.00								
4158	FK028	52.00→230.00	25.00	60.00→1330.00					44.00	150.00
4354	FK029	8.00→38.00		8.00→14.00						
4133	FK030	8.00→18.00								

TABLE 5

SUMMARY OF RESULTS FROM PRIORITY POLLUTANTS ANALYSIS
(Concentrations in ppb)

Well Number	Arsenic	Chromium	Copper	Lead	Nickel	Selenium	Zinc	Cyanide	Phenols (ppm)
W1	18.0	64.3	56.3	10.1	44.3	14.5	86.5		0.15
W2									
W3		20.2		4.8			37.3		0.005
W4*						8.2	65.1	11.0	

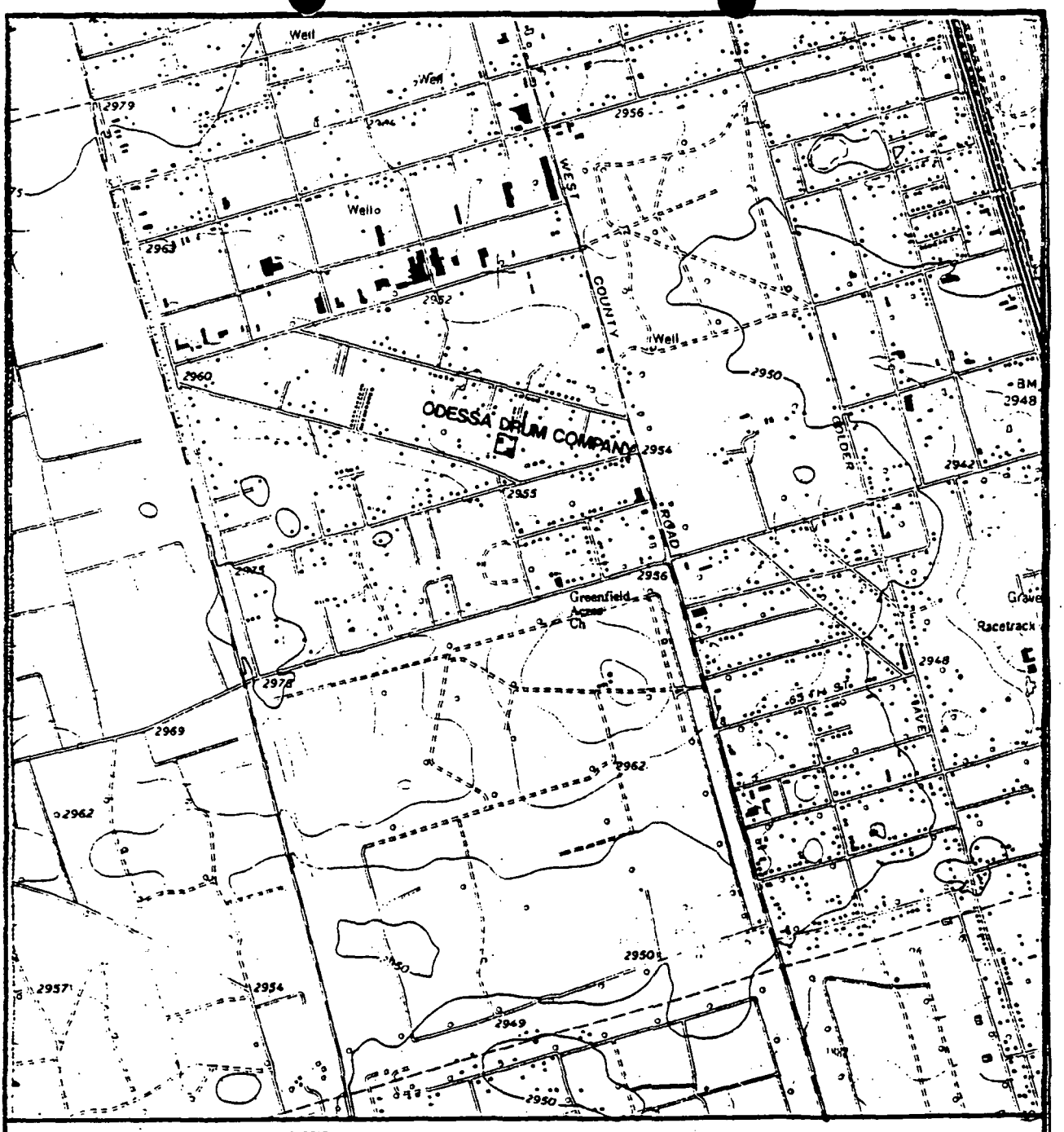
*Existing on site water well

ATTACHMENTS:

A. Site Location Map
B. Site Sketch
C. Photographs
D. Unused Photographs and Negatives
E. Records of Communication (5 pages)
F. Drums Sampled and Company Information
G. Log of Boring/Monitoring Well
H. State of Texas Well Reports
I. Quality Assurance Sampling Plan (QASP) for Drum Sampling
J. QASP for Sampling of Monitor Wells
K. CLP Laboratory Requests
L. CLP Data Packages for Drum Samples (See Separate Binders)
M. Data Package for Samples From Groundwater Monitoring Wells (See Separate Binders)
N. Copies of Drilling Subcontractor Logbook
O. Copies of Logbook #1 pages (1-23 and 42-45), Logbook #2 pages (1-48), Logbook #3 pages (1-12)
P. Copies of TDD#T06-9103-26 and Amendments A,B,C,D,E,F,G

Attachment A

Site Location Map



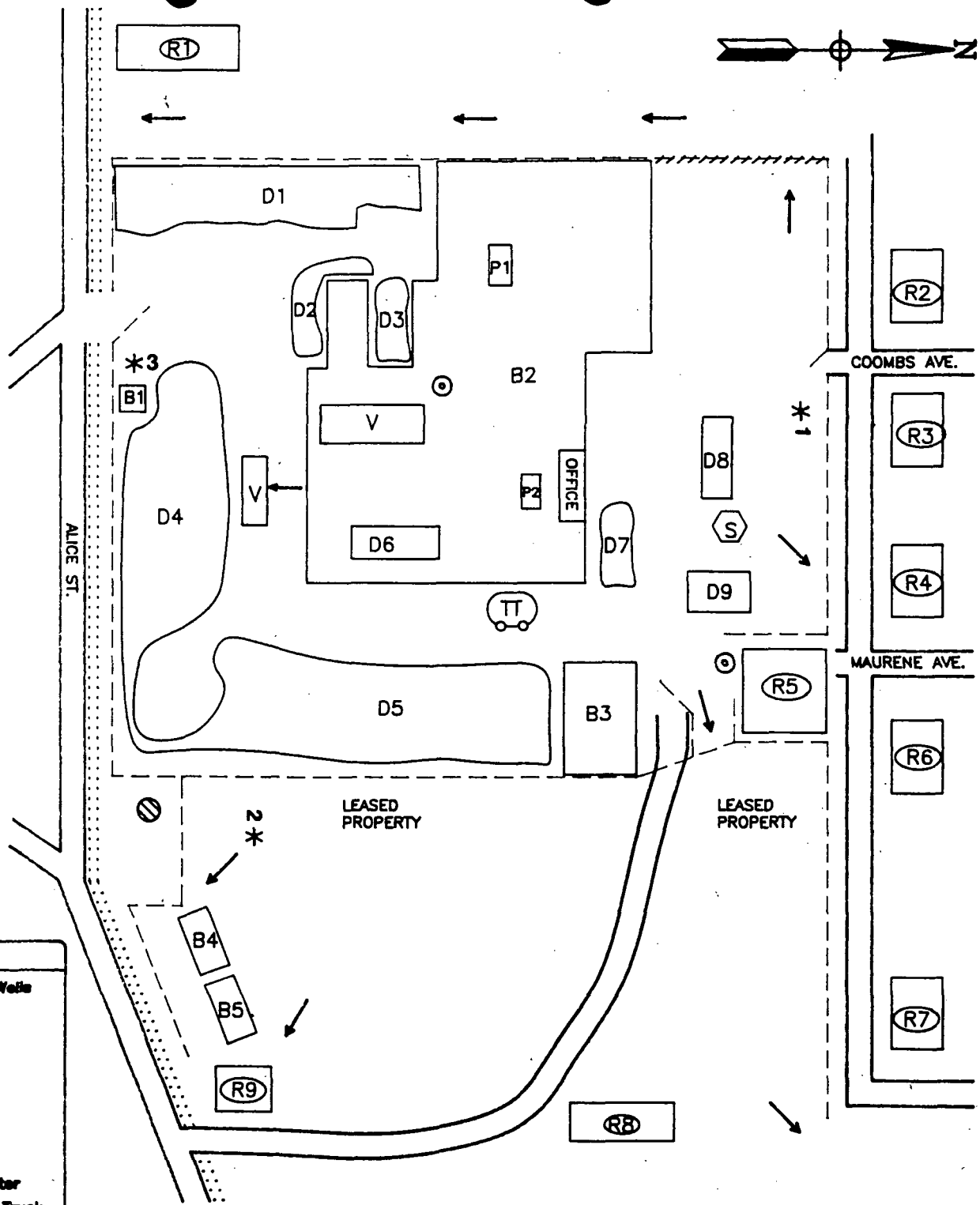
Ecology and Environment, Inc. Technical Assistance Team Region 6	CERCLIS/CASE# TXD008012254	TDD# 06-9103-26
	SOURCE: ODESSA NW QUADRANGLE 7.5 MINUTE SERIES (TOPOGRAPHIC)	

ATTACHMENT A: SITE LOCATION MAP

ODESSA DRUM COMPANY
ODESSA, ECTOR COUNTY, TEXAS

Attachment B

Site Sketch



Ecology and Environment, Inc.
Technical Assistance Team
Region 6

CERCLIS/CASE#: TXD008012254 TDD# 06-9103-26

SOURCE: Vera Henry

ODESSA DRUM COMPANY odessa.dwg

ATTACHMENT B: SITE SKETCH

Attachment C

Photographs

DRUM SAMPLING

PAGE#: 1
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 100 DATE: 05/06/91
TIME: 1125 DIRECTION: East
PHOTOGRAPHER: VH/CG

Survey flags were used to mark drums that were chosen for sampling.

PHOTO#: 101 DATE: 05/06/91
TIME: 1126 DIRECTION: East
PHOTOGRAPHER: VH/CG

Survey flags were used to mark drums that were chosen for sampling.

PAGE#: 2
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 102 DATE: 05/06/91
TIME: 1150 DIRECTION: North
PHOTOGRAPHER: VH/CG

Survey flags were used to mark drums that were chosen for sampling.

PHOTO#: 103 DATE: 05/06/91
TIME: 1127 DIRECTION: East
PHOTOGRAPHER: VH/CG

TAT preparing to open drums.

PAGE#: 3
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 104 DATE: 05/06/91
TIME: 1130 DIRECTION: East
PHOTOGRAPHER: VH/CG

TAT performing air monitoring of open drums.

PHOTO#: 105 DATE: 05/06/91
TIME: 1135 DIRECTION: West
PHOTOGRAPHER: VH/CG

TAT surveying drums to record waste descriptions.

PAGE#: 4
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 106 DATE: 05/06/91
TIME: 1140 DIRECTION: West
PHOTOGRAPHER: VH/CG

TAT surveying drums to record waste descriptions.

PHOTO#: 107 DATE: 05/06/91
TIME: 1142 DIRECTION: West
PHOTOGRAPHER: VH/CG

TAT sampling drum.

GROUNDWATER MONITORING WELLS

PAGE#: 1
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 108 DATE: 06/11/91
TIME: 1130 DIRECTION: west
PHOTOGRAPHER: Ehresmann

Split-spoon sampling with Gardner Denver drill rig.

PHOTO#: 109 DATE: 06/11/91
TIME: 1140 DIRECTION: down
PHOTOGRAPHER: Ehresmann

Split-spoon sample from 2 to 4 feet.

PAGE#: 2
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 110 DATE: 06/11/91
TIME: 1140 DIRECTION: down
PHOTOGRAPHER: Ehresmann

Split-spoon sample from 12 to 14 feet.

PHOTO#: 111 DATE: 06/11/91
TIME: 1651 DIRECTION: west
PHOTOGRAPHER: Ehresmann

Drilling well #1 with HNu performing air monitoring.

PAGE#: 3
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 112 DATE: 06/12/91
TIME: 1000 DIRECTION: west
PHOTOGRAPHER: Quina/Ehresmann

Speedstar SS15II drill rig.

PHOTO#: 113 DATE: 06/12/91
TIME: 1020 DIRECTION: down
PHOTOGRAPHER: Quina/Ehresmann

Five and 7/8 inch rock bit.

PAGE#: 4
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 114 DATE: 06/12/91
TIME: 1023 DIRECTION: east
PHOTOGRAPHER: Quina/Ehresmann

Crew removing sample from core barrel at well #1.

PHOTO#: 115 DATE: 06/12/91
TIME: 1047 DIRECTION: down
PHOTOGRAPHER: Quina/Ehresmann

Core sample from 49.5 to 54.5 feet at well #1.

PAGE#: 5
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 116 DATE: 06/12/91
TIME: 1858 DIRECTION: west
PHOTOGRAPHER: Ehresmann/Quina

Crew setting Speedstar rig up for operation on well #2.

PHOTO#: 117 DATE: 06/13/91
TIME: 1330 DIRECTION: south
PHOTOGRAPHER: Ehresmann/Quina

Crew adding PVC riser section into well #1.

PAGE#: 6
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 118 DATE: 06/13/91
TIME: 1335 DIRECTION: east
PHOTOGRAPHER: Ehresmann/Quina

Crew member placing sand pack (12-28 sand) around screen on well #1.

PHOTO#: 119 DATE: 06/13/91
TIME: 1440 DIRECTION: east
PHOTOGRAPHER: Ehresmann/Quina

Crew member adding bentonite pellets to well #1 above the PVC screen.

PAGE#: 7
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 120 DATE: 06/14/91
TIME: 1812 DIRECTION: west
PHOTOGRAPHER: Ehresmann

Crew mixing cement for well #1.

PHOTO#: 121 DATE: 06/14/91
TIME: 0820 DIRECTION: east
PHOTOGRAPHER: Ehresmann

Crew pumping cement into well #1.

PAGE#: 8
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 122 DATE: 06/14/91
TIME: 1310 DIRECTION: west
PHOTOGRAPHER: Ehresmann

Crew member deconning Speedstar drill rig. Well #2 in foreground.

PHOTO#: 123 DATE: 06/14/91
TIME: 1310 DIRECTION: west
PHOTOGRAPHER: Ehresmann

Well protector on #2 well.

PAGE#: 9
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 124 DATE: 06/14/91
TIME: 1330 DIRECTION: north
PHOTOGRAPHER: Ehresmann

Crew setting up on well #3 in front of the command post.

PHOTO#: 125 DATE: 06/14/91
TIME: 1430 DIRECTION: down
PHOTOGRAPHER: Ehresmann

Seven and 7/8 inch rock bit used to open hole large enough for casing to be added.

PAGE#: 10
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 126 DATE: 06/14/91
TIME: 1615 DIRECTION: south
PHOTOGRAPHER: Ehresmann

Two inch PVC well screen with centralizer attached.

PHOTO#: 127 DATE: 06/14/91
TIME: 1810 DIRECTION: north
PHOTOGRAPHER: Ehresmann

Adding PVC riser section to well #3.

PAGE#: 11
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 128 DATE: 06/15/91
TIME: 1425 DIRECTION: east
PHOTOGRAPHER: Ehresmann

Crew adding cement pad around well #1, note well protector and posts.

PHOTO#: 129 DATE: 06/15/91
TIME: 1510 DIRECTION: west
PHOTOGRAPHER: Ehresmann

Well #2 completed.

PAGE#: 12
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 130 DATE: 06/15/91
TIME: 1745 DIRECTION: east
PHOTOGRAPHER: Ehresmann

Crew installing cement pad and posts around well #3.

PHOTO#: 131 DATE: 06/16/91
TIME: 0820 DIRECTION: west
PHOTOGRAPHER: Ehresmann

An example of the water from well #1 taken when the well was being developed.

PAGE#: 13
TDD#: T06-9103-26
SITE NAME: Odessa Drum Company

PHOTO#: 132 DATE: 06/16/91
TIME: 1520 DIRECTION: west
PHOTOGRAPHER: Ehresmann

The 5 feet long bailer used in all the wells.

PHOTO#: 133 DATE: 06/16/91
TIME: 1540 DIRECTION: east
PHOTOGRAPHER: Ehresmann

Well #3 secured with posts, cement pad, and locked well protector.

Attachment D

Unused Photographs and Negatives

Attachment E

Records of Communication

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Myra Perez

Address Houston Lab

Phone ( ) -
(Area Code) (Number)

Date 5 / 10 / 91
(Mo) (Day) (Year)

Time _____ AM/PM

[ ] Originator Placed Call

[X] Originator Received Call

TDD# _____ PAN# _____

Subject Samples

Discussion: I requested that all samples being sent to the labs be considered as one phase. We tried to separate the phases as much as possible before sending them in, but in some instances small amounts of a material ~~that~~ could not be taken out. In instances where a sample contains sediment in the bottom or a floating oil layer on top, those should all be considered as One Phase.

Follow-Up-Action:

Originator's Signature: Vera R Henry

(RWG 6/90)

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Conversation with:

Name Greg Fife

Address _____

_____

Phone 702 - 382-1600
(Area Code) (Number)

Date 5 / 1 / 91
(Mo) (Day) (Year)

Time 3:15 AM/(PM)

[ ] Originator Placed Call

[X] Originator Received Call

TDD# _____ PAN# EPAX1120SA1

Subject Drum Sampling at Odessa

==========

Discussion: TAT Henry told OSC that we would be performing the drum sampling next week. She informed him that Myra Levy wanted to speak with him and that our samples would have to be shipped to three different labs. TAT also told him that we may not be able to sample all of the exact drums that he has listed, because they may not contain enough material for the quantity of sample that needed to be taken. He said this was fine. TAT told him that we were planning to screen the drums in Level B & if we were we would downgrade to C, otherwise those drums that gave off a high reading would have to be sampled in Level B. He said O.K.

==========

Follow-Up-Action: _____

==========

Originator's Signature: Vera R. Henry

(RWG 6/90)

Sherri Hughes
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Conversation with:

Name Hank Thompson

Address EPA

Phone - 653 2270
(Area Code) (Number)

Date 4 / 16 / 91
(Mo) (Day) (Year)

Time 1115 (AM) PM

[~~-~~] Originator Placed Call

[ ] Originator Received Call

TDD# T06-9103-26 PAN# ETX1120SA

Subject: CLP Request Form for ~~Okay~~ Odessa Drums

==========

Discussion:

Hank said he had not heard from Mupa Peng on changes, if needed. He will call her after lunch and then let me know. He also said the fill-in-the-blank form was o.k.

==========

Follow-Up-Action:

==========

Originator's Signature: S Hughes

(RWG 6/90)

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Telephone [X] [ ] Direct/Location: [ ] Other:

Conversation with:

Name Greg Fite

Address EPA - Region 6

Phone 915 - 367-3045
(Area Code) (Number)

Date 4 / 2 / 91
(Mo) (Day) (Year)

Time 4:00 AM/(PM)

[X] Originator Placed Call

[ ] Originator Received Call

TDD# T06-9103-26 PAN# ETX1120SAA

Subject Drum Sampling

Discussion: TAT called OSC to inform him that sampling of the drums would have to be delayed for a minimum of four weeks because this would be the least amount of time needed to acquire a CLP lab for the special analytical request (e.g. RCRA characteristic testing). He said that he was aware of this and to go ahead as stated.

Follow-Up-Action: TAT begin to complete paperwork needed to acquire the CLP

Originator's Signature: Vera R Henry

(RWG 6/90)

Vera B. Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Telephone ☒ ☐ Direct/Location: ☐ Other:

Conversation with:

Name Greg Fife

Address EPA Region 6

Phone 915 - 367-3045
(Area Code) (Number)

Date 4 / 2 / 91
(Mo) (Day) (Year)

Time 10:15 (AM) PM

☒ Originator Placed Call

[ ] Originator Received Call

TDD# T06-9103-26 PAN# ETX112OSAA

Subject Analyses needed for drum sampling mission

Discussion: TAT called OSC and informed him that we would need to collect MS and MSD's with our samples. Fife said that he did not want any done and that he only wants us to collect the 30 drum samples and that's it.

Follow-Up-Action: TAT revised the QASP to exclude the collection of spikes & duplicates during sampling.

Originator's Signature: Vera B Henry

(RWG 6/90)

Attachment F

Drums Sampled and Company Information

DRUMS SAMPLED AND COMPANY INFORMATION

DRUM NUMBERS	COMPANY INFORMATION
4593, 4891	Dynamit Nobel Chemicals Product of West Germany Caustic Potash
4620	Omega Chemicals Inc. Demulsifier
4622, 4248	Omega Treating Chemicals, Inc. 2500 West Francis P.O. Box 4383 Midland, TX 79701 (915) 683-3312 (409) 779-1203 Demulsifier 7001206
4882	Omega Demulsifier 7888-1-1
4647	Petrolite Tretolite
4705	Petrolite, Petrotec K-430W 369 Marshall Av. St. Louis, MO
4684, 4453	B. J. Hughes, Inc. Subsidiary of Hughes Tool Company
4159	B. J. Hughes Flammable Liquid N.O.S. UN1993 P.O. Box 442 Houston, TX 77210 (713) 351-8131

4859, 4518, 4603	SRS Specialty Research & Sales 20 West Industrial Loop Midland, TX Water Treatment Compound Liquid Corrosive Material
4499	ChemLink Petroleum Inc. 1500 Market St. P.O. Box 7258 Philadelphia, PA 19101 (215) 557-2229 (800) 424-9300 (215) 353-8300 Highly Flammable Contains Aromatic Petroleum Oil
4507	DI - CHEM ARMCO/National Chemicals Company Division of ARMCO, Inc. Flammable Liquid
4783	Exxon Chemical Curexit, AC17744
4837	CLATROL
4252	Texas Refinery Corporation Executive Offices Group Fort Worth, Toronto - M TRC
4393, 4163, 4133, 4138	Champion Chemicals Box 421 8/85 Flammable Liq. N.O.S. UN1993
4199	Van Waters & Rogers Sodium Silicate Solution Division of UNIVER San Mateo, CA 94403
4117	Hydrochem 100 Industrial Av. Box 3627 Odessa, TX

4431, 4408	Unidyne
4340	Corexit Chemicals 7672 Oil Field Bactericide Exxon Chemicals Division of Exxon Chemical Co. Houston, TX 77001 Active Ingredients: n-alkyl-1,3 propylene diamine glacial acetic acid isopropyl alcohol Warning: corrosive, flammable
4202	Nalco - Uisco - 4921 Corrosive Inhibitor (For use in high temperature CO environments in producing oil and gas wells.) Dosage - 20ppm to 100 ppm NALCO Chemical Co. P.O. Box 87 Sugarland, TX
4354	DSP Chemicals, Inc. DSR - 55 3793

Attachment G

Log of Boring/Monitor Well

LOG OF BORING/MONITOR WELL

Sheet 1 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 1	Start Date/Time: 6/11/91 Finish Date/Time: 6/13/91
David Ehresmann Logged By:	
Top of Casing Elevation:	Drilling Contractor: Winnek
Surface Elevation: ~2950'	Total Depth: 124.0' Driller: Dann Clements

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment
	SS		N	0	N		lt br fine gr sandstone
	SS		N	0	N		
	SS		N	0	N		
	SS		N	0	N		
10	SS		N	0	N	—	white fine-med gr Sandstone
	SS		N	0	N		
13½'	SS		N	0	N	—	
	CB		N	0	N		white, fine-med gr carbonate material, fractured, w/ clay lenses recovered only 3' 7½"
20 21½'	—					—	
	CB		N	0	N		white to br fine-med gr limestone recovered only 6'
29½'	—					—	
	CB		N	0	N		white to br fine-med gr limestone ~~~ contact br fine gr fractured Ss grains are subangular to angular w/ clay lenses recovered: 5"
39½'	—					—	
	CB						no recovery
44½'	—					—	
	CB		N	0	N		fine gr br Sandstone recovered 3' 2"
49½'	—					—	
	CB		N	0	N		lt br fine gr Ss w/ a granule-pebble sized gravel layer recovered 4' 4"
54½'	—					—	

Monitor/Boring Well Data

Material Discription: cement grout; 2" PVC riser section; cement grout

Concrete Pad

SS - split spoon
CB - core barrel

C0287.CDR

LOG OF BORING/MONITOR WELL

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 1 — Start Date/Time: 6/11/91 — Finish Date/Time: 6/13/91	Logged By: D Ehregmann
Top of Casing Elevation: — Surface Elevation: ~2950' — Total Depth: 124.0'	Drilling Contractor: Winnek Cos. — Driller: Donn Clements

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment	Monitor/Boring Well Data (Material Discription / Concrete Pad)
	CB		N	0	N		ltbr fine-med gr SS w/ iron staining recovered: 4'11"	
59½'	—						— stop coring.	
60								
70								cement grout; 2" PVC riser section; cement grout
							4¾" bit	
80								
							opened hole w/ 5⅞" bit from 19' - 125'	
90								
								97'6" bentonite
100							— 100'	100'
								static water level 102'; sand
								104'; 12.28 sand; screen; 12.28 sand
110								

C0287.CDR

LOG OF BORING/MONITOR WELL

Sheet 3 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 1	Start Date/Time: 6/11/91 Finish Date/Time: 6/13/91
	D Ehresmann Logged By:
Top of Casing Elevation:	Drilling Contractor: Winek Cos.
Surface Elevation: ~2950'	Total Depth: 124.0' Driller: Donn Clements

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment	Monitor/Boring Well Data
								Material Discription / Concrete Pad
120								12.28 sand; screen(.010"); 12.28 sand
							— 125'	124' sand
130								
5								
0								
5								

C0287.CDR

LOG OF BORING/MONITOR WELL

Sheet 1 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 2 — Start Date/Time: 6/13/91 — Finish Date/Time: 6/14/91	D Ehrshann — Logged By:
Top of Casing Elevation: — Drilling Contractor: Winnek Cos.	
Surface Elevation: ~2950' — Total Depth: 123.0' — Driller: Tim Fife	

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment
						7 7/8" bit, 6" PVC	
9'	C		N	0	N		whi fine gr Sand
12'	C		N	0	N		whi fine gr Sand
15'	C		N	0	N	5 7/8" bit	whi fine gr Sand
20'	C		N	0	N		whi fine gr Sand
27'	C		N	0	N		whi fine gr Sand
30'	C		N	0	N		br sand w/ granule-pebble sized fraction
35'	C		N	0	N		br sand w/ granule-pebble sized fraction
40'	C		N	0	N		br fine gr sand
45'	C		N	0	N		br fine gr sand
50'	C		N	0	N		br fine gr sand
55'							

Monitor/Boring Well Data: Material Description — Concrete Pad; cement grout; 2" PVC riser section; cement grout

C - drill cuttings

C0287.CDR

LOG OF BORING/MONITOR WELL

Sheet 2 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 2	Start Date/Time: 6/13/91 Finish Date/Time: 6/14/91
	David Ehresmann Logged By:
Top of Casing Elevation:	Drilling Contractor: Winnek Cos.
Surface Elevation: ~2950'	Total Depth: 123.0' Driller: Tim Fife

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment
60'	C		N	0	N		br Sand w/ granules to pebble sized fraction
	C		N	0	N		br sand w/ granule to pebble sized fraction
70'							br sand w/ granule to pebble sized fraction
	C		N	0	N		
80'						5 7/8" bit	
	C		N	0	N		br sand w/ granule to pebble sized fraction
85'							br sand w/ granule to pebble sized fraction
	C		N	0	N		
95'							no recovery
99'	C		N	0	N		granule to pebble gravel layer
105'							
	C		N	0	N		

Monitor/Boring Well Data

Material Discription

Concrete Pad

static water level

95½'

98'

100'

cement grout

8" PVC riser section

cement grout

bentonite

bentonite

sand (12-28)

screen (.010')

sand (12-28)

C0287.CDR

LOG OF BORING/MONITOR WELL

Sheet 3 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 2	Start Date/Time: 6/13/91 Finish Date/Time: 6/14/91
	Logged By: DEhresmann
Top of Casing Elevation:	Drilling Contractor: Winnek Cos.
Surface Elevation: ~2950'	Total Depth: 123.0' Driller: Tim Fife

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment	Monitor/Boring Well Data
	C		N	0	N	5'8" silt	fine gr. br. sand	Material Discription: Concrete Pad; sand; screen; sand
121'								120' sand
123'								

C0287.CDR

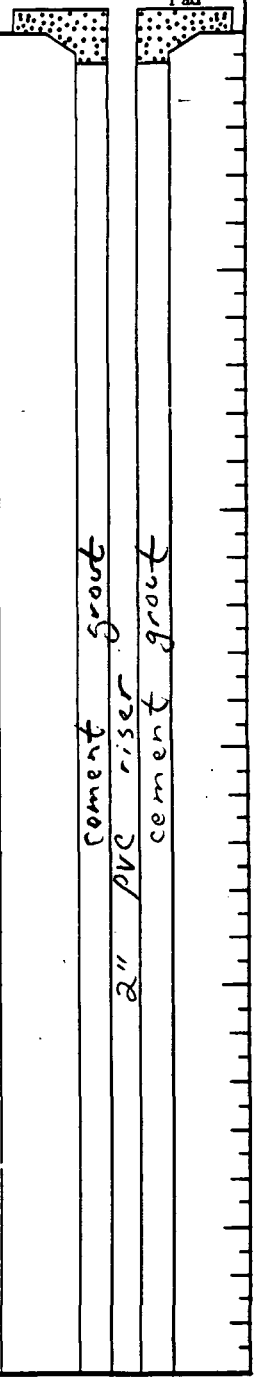
LOG OF BORING/MONITOR WELL

Sheet 1 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 3	Start Date/Time: 6/14/91 Finish Date/Time: 6/16/91
Logged By:	
Top of Casing Elevation:	Drilling Contractor: Winek Cos.
Surface Elevation: ~2950'	Total Depth: 124.0' Driller: Tim Fife

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment
	C		N	0	N		lt br fine gr sand
4.5'			N	0	N		lt br-wh lk ss

Monitor/Boring Well Data



C0287.CDR

LOG OF BORING/MONITOR WELL

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 3	Start Date/Time: 6/14/91 Finish Date/Time: 6/16/91
	D Thesanan Logged By:
Top of Casing Elevation:	Drilling Contractor: Winnek
Surface Elevation: ~2950'	Total Depth: 124.0' Driller: Tim Fife

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment	Monitor/Boring Well Data
								Material Discription / Concrete Pad
60								cement grout
70								2" PVC riser
80								cement grout
90								
98.5'								bentonite
99'								bentonite
100							static water level	
100.5'								
104'								sand 12·28 screen
110								sand 12·28

C0287.CDR

LOG OF BORING/MONITOR WELL

Sheet 3 of 3

Project Name: Odessa Drum	Job #
Location: Odessa, Ector Co., Texas	LPST #
Boring/MW Number: 3	Start Date/Time: 6/14/91 Finish Date/Time: 6/16/91
Logged By: D Ehresmann	
Top of Casing Elevation:	Drilling Contractor: Winek
Surface Elevation: ~2950'	Total Depth: 124.0' Driller: Tim Fife

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu (ppm)	Contamination: Visible Y=yes N=no	Soil Rock Symbol	Soil and Rock Description/Comment	Monitor/Boring Well Data
120								Material Discription: Concrete Pad; sand 12-28; screen (.010"; sand 12-28; 124'

C0287.CDR

Attachment H

Well Reports

W-1

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711 — *Please use black ink.*

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) **OWNER** Environmental Protection Agency (Name) **ADDRESS** 1445 Ross Ave., Ste 1200 Dallas Tx 75202 (Street or RFD) (City) (State) (Zip)

2) **LOCATION OF WELL:** County ECTOR . 6 miles in N + W (NE, SW, etc.) direction from ODESSA, Texas (Town)

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ **LEGAL DESCRIPTION:**

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☐ **SEE ATTACHED MAP**

3) **TYPE OF WORK (Check):**
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) **PROPOSED USE (Check):**
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) **DRILLING METHOD (Check):** ☐ Driven
☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Other _____

6) **WELL LOG:**
Date Drilling: Started 6-11 19 91 Completed 6- 19 —

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7 7/8	Surface	19.0
5 7/8	19.0	124.0

7) **BOREHOLE COMPLETION:**
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 100.0 ft. to 124.0 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	19.0	Loose Sand
19.0	124.0	White Sandstone

(Use reverse side if necessary)

8) **CASING, BLANK PIPE, AND WELL SCREEN DATA:**

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
2	N	PVC Screen	104.0	124.0	0.10
2	N	PVC Blank	0	104.0	Sch 40

9) **CEMENTING DATA** [Rule 287.44(1)]
Cemented from 0 ft. to 97.5 ft. No. of Sacks Used 13.0
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Cement Grout
Cemented by Drill Crew

10) **SURFACE COMPLETION**
☒ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☐ Approved Alternative Procedure Used [Rule 287.71]

13) **TYPE PUMP:**
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other Dedicated Bailer
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) **WELL TESTS:** None
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

11) **WATER LEVEL:**
Static level 102.0 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

12) **PACKERS:** Type Depth
None

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME The Winnek Companies (Type or print) **WELL DRILLER'S LICENSE NO.** 02821m

ADDRESS Box 1559 (Street or RFD) Elk City (City) Okla (State) 73648 (Zip)

(Signed) Worrel C. Clements (Licensed Well Driller) **(Signed)** _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

WWD-012 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711 W-2 *Please use black ink.*

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas
WELL REPORT

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) **OWNER** Environmental Protection Agency (Name) **ADDRESS** 1445 Ross Ave, Ste 1200 (Street or RFD) Dallas (City) TX (State) 75202 (Zip)

2) **LOCATION OF WELL:** County Ector . 6 miles in N & W (NE, SW, etc.) direction from ODESSA, Texas (Town)

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ **LEGAL DESCRIPTION:**

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☐ **SEE ATTACHED MAP**

3) **TYPE OF WORK (Check):**
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) **PROPOSED USE (Check):**
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) **DRILLING METHOD (Check):** ☐ Driven
☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Other _____

6) **WELL LOG:**
Date Drilling: Started 6-13 19 91 Completed _____ 19 __

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
7 7/8	Surface	9.0
5 7/8	9.0	123.0

7) **BOREHOLE COMPLETION:**
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 98.0 ft. to 124.0 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	4.0	Loose Sand
4.0	123.0	Soft White Sandstone

(Use reverse side if necessary)

8) **CASING, BLANK PIPE, AND WELL SCREEN DATA:**

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
2	N	PVC Screen	100.0	120.0	0.10
2	N	PVC Blank	0	100.0	Sch 40

9) **CEMENTING DATA** [Rule 287.44(1)]
Cemented from 0 ft. to 95.5 ft. No. of Sacks Used 13
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Cement Grout
Cemented by Drill Crew

10) **SURFACE COMPLETION**
☒ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☐ Approved Alternative Procedure Used [Rule 287.71]

11) **WATER LEVEL:**
Static level 91.0 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) **PACKERS:** Type None Depth

13) **TYPE PUMP:**
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other Dedicated Bailer
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) **WELL TESTS:** None
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME The Winnek Companies (Type or print) **WELL DRILLER'S LICENSE NO.** 02821

ADDRESS Box 1559 (Street or RFD) Elk City (City) OK (State) 73648 (Zip)

(Signed) Donald C. Clement (Licensed Well Driller) **(Signed)** _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

WWD-012 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

W.3

Please use black ink,
Send original copy by certified mail to the
Texas Water Commission
P.O. Box 13087
Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

1) OWNER Enviornmental Protection Agency (Name) Address 1445 Ross Ave. Ste 1200 (Street or RFD) Dallas (City) Tx (State) 7582((Zip)

2) LOCATION OF WELL:
County Ector 6 miles in N+W (N.E., S.W., etc.) direction from ODESSA, Texas (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☐ See attached map.

3) **TYPE OF WORK** (Check):
☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) **PROPOSED USE** (Check):
☐ Domestic ☐ Industrial ☑ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ Other _____

5) **DRILLING METHOD** (Check):
☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☐ Bored ☑ Air Rotary ☐ Cable Tool ☐ Other _____

6) **WELL LOG:**
Date Drilling: Started 6-14 19 91 Completed _____ 19 ___

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
7 7/8	Surface	9.0
5 7/8	9.0	124.0

7) **BOREHOLE COMPLETION:**
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☑ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 99.0 ft. to 124.0 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	4.5	Loose SAnd
4.5	124.0	white SAndstone

8) **CASING, BLANK PIPE, AND WELL SCREEN DATA:**

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
2	N	PVC Screen	104.0	124.0	0.1
2	N	PVC Blank	0	104.0	Sch

9) **CEMENTING DATA** [Rule 319.44(b)]
Cemented from _____ ft. to _____ ft. No. of Sacks Used _____
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Cement Grout
Cemented by Drill Crew

10) **SURFACE COMPLETION**
☑ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

11) **WATER LEVEL:**
Static level 100.5 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) **PACKERS:** Type None Depth

13) **TYPE PUMP:**
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other Dedicated Bailer
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) **WELL TESTS:** None
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

(Use reverse side if necessary)

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☑ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I here by certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME The Winnek Companies (Type or Print) Water Well Driller's License No. 02821 m

ADDRESS Box 1559 (Street or RFD) Elk City (City) Okla. (State) 73648 (Zip)

(Signed) Donall C. Clements (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only
Well No. _____
Located on map _____

WWD-012 (Rev.01-28-87)

TEXAS WATER COMMISSION COPY

Attachment I

Quality Assurance Sampling Plan (QASP) for Drum Sampling

Sampling QA/QC Work Plan

Odessa Drum

Prepared by
Ecology And Environment Inc.

EPA Project No.: ZT1061
Contractor Work Order No.: T06-9103-26
EPA Contract No.: 68-WO-0037

Approvals

Ecology And Environment Inc.

Sherri Hughes — 5/3/91 Date
Project Director

Vera R. Henry — 5/3/91 Date
Project Manager

EPA

Greg Fife — 5/3/91 Date
On-Scene Coordinator

1.0 BACKGROUND

The [suspected] contamination is a result of:

Abandoned drums

The following information is known about the site:

The site is located in the city of Odessa in the county of Ector in the state of Texas. The nearest residents are located within 10.0 feet of the site, in a west direction. Other residents or significant environments in proximity to this site are located 10 feet due east of the site.

It is a drum recycling facility on 3 acres which had been operating for 5 years and is now abandoned since 1989.

The types of material(s) handled by this facility were:

acids
bases
inorganics
organics
petroleum products
unknown

The volume(s) of contaminated materials to be addressed are:

30 55 - gallon drums which are full or at least one-half full.

The contaminants of concern are:

acids
bases
organic compounds
inorganic compounds

The basis of this information may be found in:

Investigations by the Texas Water Commission and the United States Environmental Protection Agency, Region 6. Additional information can be found in the Odessa Drum Site Assessment Report,written by the Region 6, Technical Assistance Team (July, 1990).

2.0 DATA USE OBJECTIVES

The objective of this project / sampling event is to determine:

the presence of contamination
the magnitude of contamination

For the purpose of:

Enforcement Plan

3.0 QUALITY ASSURANCE OBJECTIVES

As identified in Sections 1.0 and 2.0 the objective of this project/event applies to the following parameters:

Parameters	Matrix	Intended Use Of Data	QA Objective
Corrosivity (acidic)	Drum Liquid	Enforcement Plan	QA-2
BNA	Drum Liquid	Enforcement Plan	QA-2
Corrosivity (basic)	Drum Liquid	Enforcement Plan	QA-2
Corrosivity (NACE)	Drum Liquid	Enforcement Plan	QA-2
Cyanide Reactivity	Drum Liquid	Enforcement Plan	QA-2
Ignitability	Drum Liquid	Enforcement Plan	QA-2
Metals	Drum Liquid	Enforcement Plan	QA-2
Reactivity to water	Drum Liquid	Enforcement Plan	QA-2
Sulfide reactivity	Drum Liquid	Enforcement Plan	QA-2
VOA	Drum Liquid	Enforcement Plan	QA-2

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Sampling Equipment

The following equipment will be utilized to obtain environmental samples from the respective media/matrix:

Parameter/Matrix	Sampling Equipment	Fabrication	Dedicated
Acids in Drum Liquid	Coliwasa	glass	Yes
BNA in Drum Liquid	Coliwasa	glass	Yes
Corrosivity in Drum Liquid	Coliwasa	glass	Yes

Cyanide Reactivity in Drum Liquid	Coliwasa	glass	Yes
Ignitability in Drum Liquid	Coliwasa	glass	Yes
Metals in Drum Liquid	Coliwasa	glass	Yes
Reactivity to water in Drum Liquid	Coliwasa	glass	Yes
Sulfide reactivity in Drum Liquid	Coliwasa	glass	Yes
VOA in Drum Liquid	Coliwasa	glass	Yes

4.2 Sampling Design

The sampling locations are depicted on the attached Sample Location Map (Figure 4-1) and are based on the following rationale:

Drums to be sampled were selected by the OSC. These drums are mixed in with other drums on site, therefore; the drums to be sampled will be marked with survey flags before sampling activities begin.

Samples are to be analyzed under the Contract Laboratory Program.

4.3 Standard Operating Procedures

4.3.1 Sample Documentation

Field data and information on work activities during this project will be recorded by TAT personnel in the field log book consistent with E & E SOP-Field Activity Logbooks, GENTECH 4.1 All Chain of Custody Seals, Tags and Records must be completed in accordance with E & E SOP Laboratory and Field Personnel Chain-of-Custody Documentation and Quality Assurance/Quality Control Procedures Manual, December 1984. All EPA Contract Laboratory Program (CLP) samples must adhere to additonal requirements including the organic and inoganic trafficking reports described in the User's Guide to the Contract Laboratory Program. All sample documents must be completed legibly in ink. Any corrections or revisions must be made by lining through the incorrect entry and by initialing and dating the error.

4.3.2 Sampling SOP's

Drum Sampling

Drum sampling procedures will adhere to ERT Drum Sampling SOP. (Attachment A)

4.3.3 Sample Handling and Shipment

Each of the sample bottles will be sealed and labeled according to the following protocol. Caps will be secured with custody seals. Bottle labels will contain all required information including sample number, time and date of collection, analysis requested, and preservative used. Sealed bottles will be placed in paint cans (medium and high concentration samples only) and then placed in large metal or plastic coolers, packed with ice and padded with an absorbent material such as vermiculite.

All sample documents will be affixed to the underside of each cooler lid. The lid will be sealed and affixed on at least two sides with EPA custody seals so that any sign of tampering is easily visible.

For further information see the E & E SOP-Laboratory and Field Personnel Chain-Of-Custody Documentation and Quality Assurance/Quality Control Procedures Manual. See also, the EPA User's Guide to the Contract Laboratory Program.

4.4 Schedule of Activities

Table 1: Proposed Schedule of Work

Activity	Start Date	End Date
Laboratory Procurement	04/05/91	05/15/91
Mobilize for Drum Sampling	05/06/91	05/06/91
Locate and Mark Drums	05/06/91	05/07/91
Sample Drums	05/07/91	05/09/91
Package and Ship Samples	05/08/91	05/10/91
Analytical Results	06/17/91	06/17/91
Final Report	07/31/91	07/31/91

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The EPA On-Scene Coordinator, Greg Fife, will provide overall direction to Ecology And Environment Inc. staff concerning project sampling needs, objectives and schedule.

The Ecology And Environment Inc. Task Leader, Vera R. Henry, is the primary point of contact with the EPA On-Scene Coordinator. The Task Leader is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables.

The Ecology And Environment Inc. Site QC Coordinator, Carol Geraghty, is responsible for ensuring field adherence to the Sampling QA/QC Plan and recording any deviations. The Site QC Coordinator is also the primary project team contact with the lab.

The following sampling personnel will work on this project:

Personnel	Responsibility
Vera R. Henry	Task Leader
Carol Geraghty	QA/QC
Gary Dry	Health and Safety

The following laboratories will be providing the following analyses:

Lab Name / Location	Lab Type	Parameters
Environmental Industrial Research 161 James Drive West, Suite 100 St. Rose, LA 70087	CLP	VOA, BNA
Silver Valley One Government Gulch Kellog, Idaho 83837	CLP	Metals
Industrial Corrosion Mgmt. 1152 Route 10 Randolph, NJ 07869	CLP	RCRA Charac.

6.0 QUALITY ASSURANCE REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0:

The following QA Protocols for QA-2 data are applicable to all sample matrices and include:

1. Provide sample documentation in the form of field logbooks, the appropriate field data sheets and chain of custody forms. Chain of custody sheets are optional for field screening locations.

2. All instrument calibration and/or performance check procedures/methods will be summarized and documented in the field/personal or instrument log notebook.

3. The detection limit will be determined and recorded, along with the data, where appropriate.

4. Document sample holding times; this includes documentation of sample collection and analysis dates.

5. Provide initial and continuing instrument calibration data.

6. Samples will undergo the following:

   1. Definitive identification:

      Unscreened data - confirm the identification of analytes via an EPA-approved method on all unscreened environmental samples; provide documentation such as gas chromatograms, mass spectra, etc.

   2. Non-definitive quantitation:

      Unscreened data - provide documentation of quantitative results.

7. QC Samples will consist of:

   Non-aqueous organics - one double volume per twenty for matrix spike/matrix spike duplicate

   Aqueous organics - one triple volume per twenty for matrix spike/ matrix spike duplicate

   Non-aqueous inorganics - one double volume per twenty for matrix spike/matrix spike duplicate

7.0 DELIVERABLES

The Ecology And Environment Inc. Task Leader, Vera R. Henry, will maintain contact with the EPA On-Scene Coordinator, Greg Fife, to keep him informed about the technical and financial progress of this project. This communication will commence with the issuance of the

work assignment and project scoping meeting. Activities under this project will be reported in a final report. Activities will also be summarized in appropriate format for inclusion in monthly and annual reports.

The following deliverables will be provided under this project:

Analysis

This sampling event requires analytical services. Documentation of lab selection will be provided in the analytical project report The results will be summarized in the final sampling report.

Final Report

A final report will be prepared, by the TAT to correlate available background information with data generated under this sampling event. Appropriate maps, figures, and attachments will supplement the written report.

8.0 DATA VALIDATION

Data validation will be performed by the EPA Sample Management Office.

Odessa Drum
Figure 1-1 Site Location Map

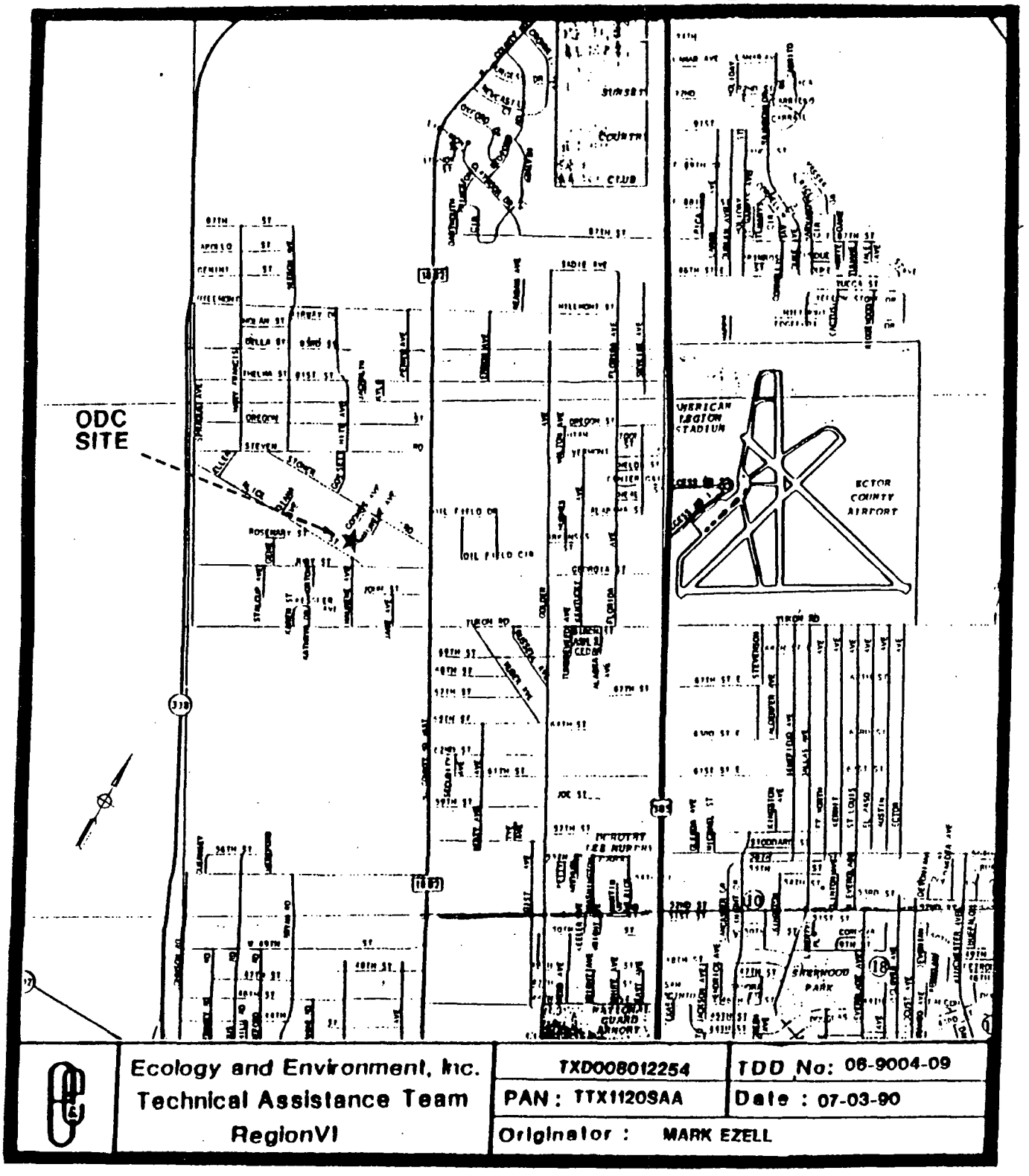
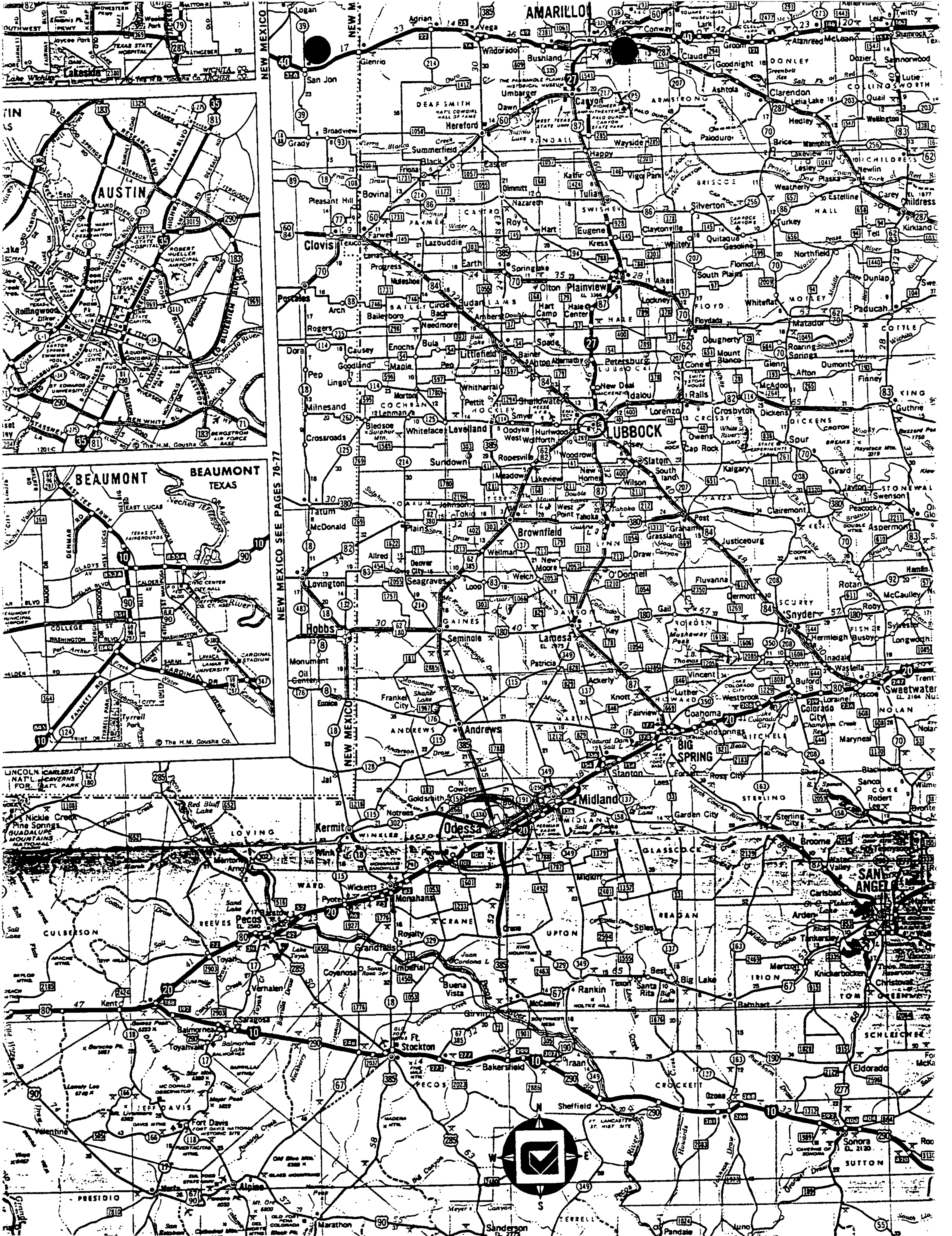
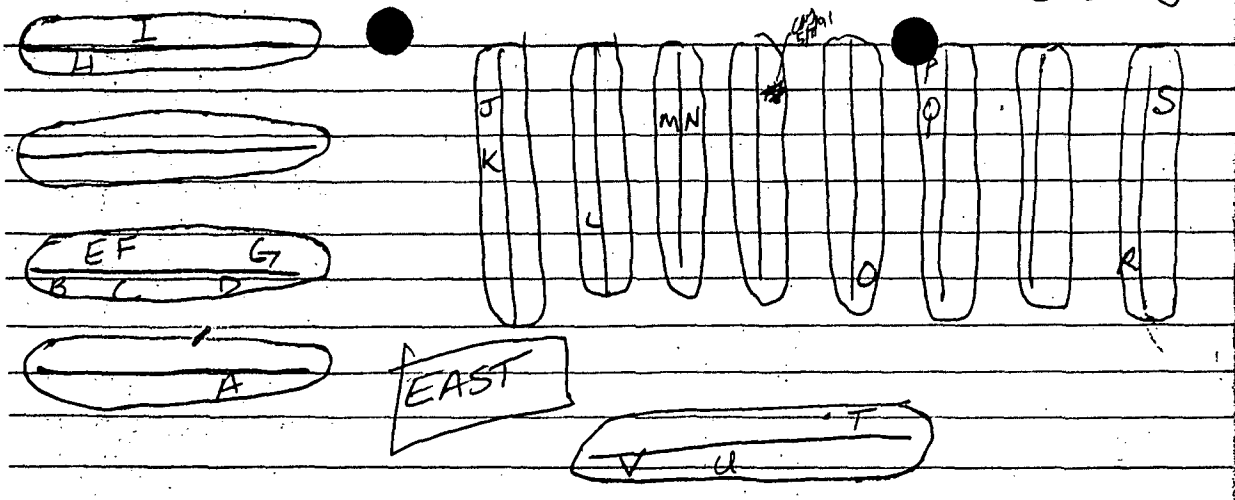


Figure 2: Location map showing location of Odessa Drum Company Site. Odessa, Ector County, Texas


AUSTIN
BEAUMONT
BEAUMONT TEXAS
NEW MEXICO SEE PAGES 76-77
NEW MEXICO
AMARILLO
LUBBOCK
Clovis
Portales
Hobbs
Lovington
Plainview
Hereford
Canyon
Levelland
Brownfield
Lamesa
Snyder
Post
Seminole
Andrews
BIG SPRING
Midland
Odessa
Kermit
Monahans
Pecos
Ft. Stockton
Alpine
Marfa
Fort Davis
Sweetwater
SAN ANGELO
Sonora
Ozona
Iraan
McCamey
Crane
Rankin
Big Lake
Colorado City
Tahoka
Slaton
Littlefield
Muleshoe
Tulia
Childress
Paducah
Matador
Crosbyton
Spur
Dickens
Vega
Dumas
Claude
Clarendon
Memphis
Shamrock
McLean
Eldorado
Sanderson
Marathon
Van Horn
Kent
Balmorhea
Toyah
Wink
Denver City
Seagraves
Gail
Garden City
Stanton
Robert Lee
Roby
Rotan
Sterling City
© The H.M. Gousha Co.

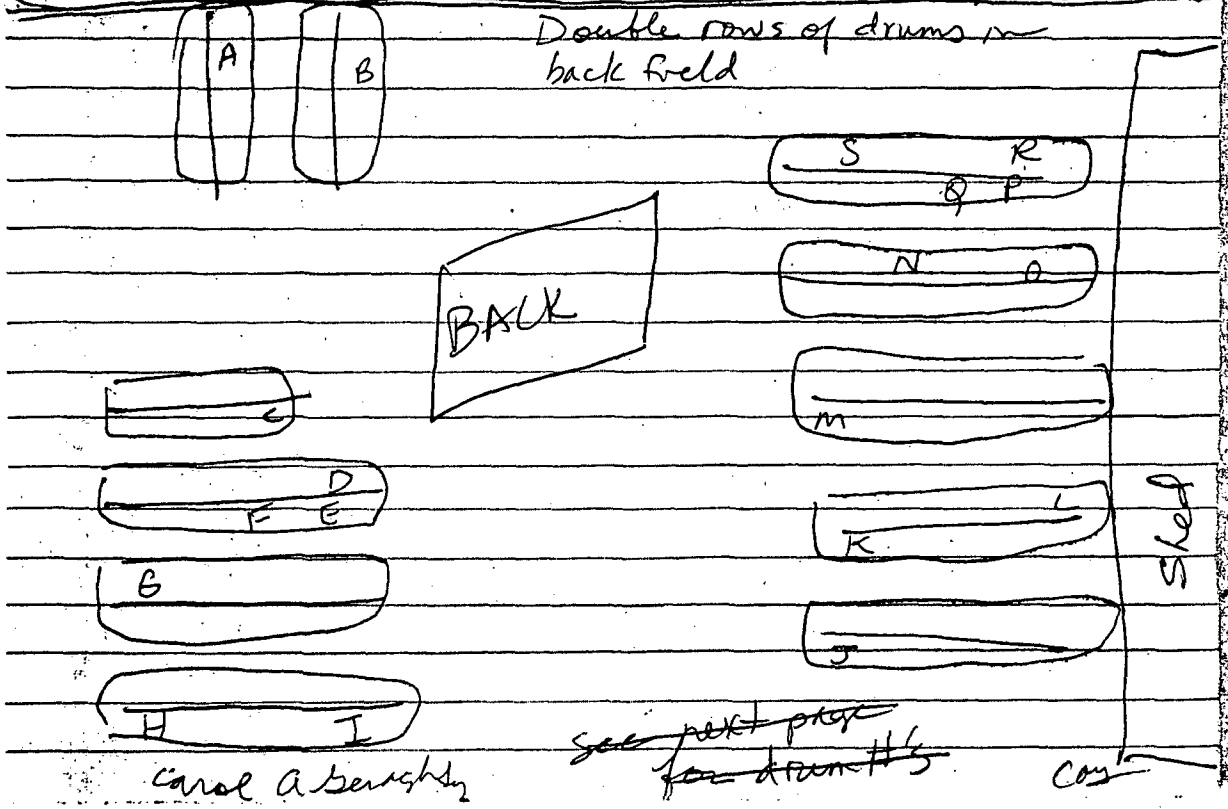
Odessa Drum
Figure 4-1 Sample Location Map

TO6-9103-7.4 5-3-71 Tuesday



Double rows of drums in east field — Drum Numbers as follows

A = 4453 B = 4512 C = 4507 D = 4499 E = 4534
F = 4532 G = 4518 H = 4593 I = 4603 J = 4622
K = 4620 L = 4647 M = 4684 N = 4705 O = 4756
P = 4783 Q = 4777 R = 4837 S = 4859 T = 4882
U = 4898 V = 4891 (circled drums will not be sampled) Cors



TARGET COMPOUND LIST (TCL) AND

CONTRACT REQUIRED QUANTITATION LIMITS (CROL)*

Volatiles		CAS Number	Quantitation Limits** Water Low ug/L	Soil/Sediment a ug/Kg
1.	Chloromethane	74-87-3	10	10
2.	Bromomethane	74-83-9	10	10
3.	Vinyl Chloride	75-01-4	10	10
4.	Chloroethane	75-00-3	10	10
5.	Methylene Chloride	75-09-2	5	5
6.	Acetone	67-64-1	10	10
7.	Carbon Disulfide	75-15-0	5	5
8.	1,1-Dichloroethane	75-35-4	5	5
9.	1,1-Dichloroethane	75-34-3	5	5
10.	1,2-Dichloroethane (total)	540-59-0	5	5
11.	Chloroform	67-66-3	5	5
12.	1,2-Dichloroethane	107-06-2	5	5
13.	2-Butanone	78-93-3	10	10
14.	1,1,1-Trichloroethane	71-55-6	5	5
15.	Carbon Tetrachloride	56-23-5	5	5
16.	Vinyl Acetate	108-05-4	10	10
17.	Bromodichloromethane	75-27-4	5	5
18.	1,2-Dichloropropene	78-87-5	5	5
19.	cis-1,3-Dichloropropene	10061-01-5	5	5
20.	Trichloroethene	79-01-6	5	5
21.	Dibromochloromethane	124-48-1	5	5
22.	1,1,2-Trichloroethane	79-00-5	5	5
23.	Benzene	71-43-2	5	5
24.	trans-1,3-Dichloropropene	10061-02-6	5	5
25.	Bromoform	75-25-2	5	5
26.	4-Methyl-2-pentanone	108-10-1	10	10
27.	2-Hexanone	591-78-6	10	10
28.	Tetrachloroethane	127-18-4	5	5
29.	Toluene	108-88-3	5	5
30.	1,1,2,2-Tetrachloroethane	79-34-5	5	5
31.	Chlorobenzene	108-90-7	5	5
32.	Ethyl Benzene	100-41-4	5	5
33.	Styrene	100-42-5	5	5
34.	Xylenes (total)	1330-20-7	5	5

a Medium Soil/Sediment Contract Required Quantitation Limits (CRQL) for Volatile TCL Compounds are 125 times the individual Low Soil/Sediment CRQL.

* Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

** Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

Semivolatiles		CAS Number	Quantitation Limits** Water Low ug/L	Soil/Sediment ug/Kg
35.	Phenol	108-95-2	10	330
36.	bis (2-Chloroethyl) ether	111-44-4	10	330
37.	2-Chlorophenol	95-57-8	10	330
38.	1,3-Dichlorobenzene	541-73-1	10	330
39.	1,4-Dichlorobenzene	106-46-7	10	330
40.	Benzyl alcohol	100-51-6	10	330
41.	1,2-Dichlorobenzene	95-50-1	10	330
42.	2-Methylphenol	95-48-7	10	330
43.	bis (2-Chloroisopropyl) ether	108-60-1	10	330
44.	4-Methylphenol	106-44-5	10	330
45.	N-Nitroso-di-n-dipropylamine	621-64-7	10	330
46.	Hexachloroethane	67-72-1	10	330
47.	Nitrobenzene	98-95-3	10	330
48.	Isophorone	78-59-1	10	330
49.	2-Nitrophenol	88-75-5	10	330
50.	2,4-Dimethylphenol	105-67-9	10	330
51.	Benzoic acid	65-85-0	50	1600
52.	bis (2-Chloroethoxy) methane	111-91-1	10	330
53.	2,4-Dichlorophenol	120-83-2	10	330
54.	1,2,4-Trichlorobenzene	120-82-1	10	330
55.	Naphthalene	91-20-3	10	330
56.	4-Chloroaniline	106-47-8	10	330
57.	Hexachlorobutadiene	87-68-3	10	330
58.	4-Chloro-3-methylphenol (para-chloro-meta-cresol)	59-50-7	10	330
59.	2-Methylnaphthalene	91-57-6	10	330
60.	Hexachlorocyclopentadiene	77-47-4	10	330
61.	2,4,6-Trichlorophenol	88-06-2	10	330
62.	2,4,5-Trichlorophenol	95-95-4	50	1600
63.	2-Chloronaphthalene	91-58-7	10	330
64.	2-Nitroaniline	88-74-4	50	1600
65.	Dimethylphthalate	131-11-3	10	330
66.	Acenaphthylene	208-96-8	10	330
67.	2,6-Dinitrotoluene	606-20-2	10	330
68.	3-Nitroaniline	99-09-2	50	1600
69.	Acenaphthene	83-32-9	10	330
70.	2,4-Dinitrophenol	51-28-5	50	1600
71.	4-Nitrophenol	100-02-7	50	1600
72.	Dibenzofuran	132-64-9	10	330
73.	2,4-Dinitroroluene	121-14-2	10	330

74.	Diethylphthalate	84-66-2	10	330
75.	4-Chlorophenyl-phenyl ether	7005-72-3	10	330
76.	Fluorene	86-73-7	10	330
77.	4-Nitroaniline	100-01-6	50	1600
78.	4,6-Dinitro-2-methylphenol	534-52-1	50	1600
79.	N-nitrosodiphenylamine	86-30-6	10	330
80.	4-Bromophenyl-phenyl ether	101-55-3	10	330
81.	Hexachlorobenzene	118-74-1	10	330
82.	Pentachlorophenol	87-86-5	50	1600
83.	Phenanthrene	85-01-8	10	330
84.	Anthracene	120-12-7	10	330
85.	Di-n-butylphthalate	84-74-2	10	330
86.	Fluoranthene	206-44-0	10	330
87.	Pyrene	129-00-0	10	330
88.	Butylbenzylphthalate	85-68-7	10	330
89.	3,3-Dichlorobenzidine	91-94-1	20	660
90.	Benzo (a) anthracene	56-55-3	10	330
91.	Chrysene	218-01-9	10	330
92.	bis (2-Ethylhexyl) phthalate	117-81-7	10	330
93.	Di-n-octylphthalate	117-84-0	10	330
94.	Benzo (b) fluoranthene	205-99-2	10	330
95.	Benzo (k) fluoranthene	207-08-9	10	330
96.	Benzo (a) pyrene	50-32-8	10	330
97.	Indeno (1,2,3-cd) pyrene	193-39-5	10	330
98.	Dibenz (a,h) anthracene	53-70-3	10	330
99.	Benzo (g,h,i) perylene	191-24-2	10	330

b Medium Soil/Sediment Contract Required Quantitation Limits (CRQL) for SemiVolatile TCL Compounds are 60 times the individual Low Soil/Sediment CRQL.

* Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

** Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

Pesticides/PCBs		CAS Number	Quantitation Limits** Water Low ug/L	Soil/Sediment ug/Kg
100.	alpha-BHC	319-84-6	0.05	8.0
101.	beta-BHC	319-85-7	0.05	8.0
102.	delta-BHC	319-86-8	0.05	8.0
103.	gamma-BHC (Lindane)	58-89-9	0.05	8.0
104.	Heptaclor	76-44-8	0.05	8.0
105.	Aldrin	309-00-2	0.05	8.0
106.	Heptachlor epoxide	1024-57-3	0.05	8.0
107.	Endosulfan I	959-98-8	0.05	8.0
108.	Dieldrin	60-57-1	0.10	16.0
109.	4,4'-DDE	72-55-9	0.10	16.0
110.	Endrin	72-20-8	0.10	16.0
111.	Endosulfan II	33213-65-9	0.10	16.0
112.	4,4'-DDD	72-54-8	0.10	16.0
113.	Endosulfan sulfate	1031-07-8	0.10	16.0
114.	4,4'-DDT	50-29-3	0.10	16.0
115.	Methoxychlor	72-43-5	0.5	80.0
116.	Endrin ketone	53494-70-5	0.10	16.0
117.	alpha-Chlordane	5103-71-9	0.5	80.0
118.	gamma-Chlordane	5103-74-2	0.5	80.0
119.	Toxaphene	8001-35-2	1.0	160.0
120.	Aroclor-1016	12674-11-2	0.5	80.0
121.	Aroclor-1221	11104-28-2	0.5	80.0
122.	Aroclor-1232	11141-16-5	0.5	80.0
123.	Aroclor-1242	53469-29-6	0.5	80.0
124.	Aroclor-1248	12672-29-6	0.5	80.0
125.	Aroclor-1254	11097-69-1	1.0	160.0
126.	Aroclor-1260	11096-82-5	1.0	160.0

c Medium Soil/Sediment Contract Required Quantitation Limits (CRQL) for Pesticides/PCB TCL compounds are 15 times the individual Low Soil/Sediment CRQL.

* Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

** Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

INORGANIC TARGET ANALYTE LIST (TAL)

Analyte	Contract Required Detection Limit 1,2 (ug/L -- water*)
Aluminum	200
Antimony	60
Arsenic	10
Barium	200
Beryllium	5
Cadnium	5
Calcium	5000
Chromium	10
Cobalt	50
Copper	25
Iron	100
Lead	5
Magnesium	5000
Manganese	15
Mercury	0.2
Nickel	40
Potassium	5000
Selenium	5
Silver	10
Sodium	5000
Thallium	10
Vanadium	50
Zinc	20
Cyanide	10

1 Subject to the restrictions specified in the first page of Part G. Section IV of Exhibit D (Alternate Methods - Catastrophic Failure) any analytical method specified in SOW Exhibit D may be utilized as long as the documented instrument or method detection limits meet the Contract Required Detection Limit (CRDL) requirements. Higher detection limits may only be used in the following circumstances:

If the sample concentration exceeds five times the detection limit of the instrument or method in use, the value may be reported even though the instrument or method detection limit may not equal the CRDL. This is illustrated in the example below:

For lead:
Method in use = ICP
Instrument Detection Limit (IDL) = 40

Sample concentration = 220
Contract Required Detection Limit = 5

* Sediment detection limit 100x water

Table 2 : Field Sampling Summary

Analytical Parameter	Level of Sensivity		Matrix	Container Type Volume, Quantity	Preserv-ative	Holding Times	Subtotal Samples	QC Extras: Rinsate Blanks	QC Extras: Trip Blanks (VOA's)	QC Extras: QC Pos.	QC Extras: Matrix Spikes
Corrosivity (Acidic)	2	pH	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A
VOA			Drum Liquid	2-40 ml glass vial, full	none	10 days	30	N/A	N/A	N/A	4
BNA			Drum Liquid	2-80 oz. amber glass, full	none	35 days	30	N/A	N/A	N/A	4
Reactivity to water	1	pos. rxn	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A
Corrosivity (Basic)	12.5	pH	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A
Inorganics			Drum Liquid	1 liter plastic, full	nitric acid	35 days	30	N/A	N/A	N/A	4
Cyanide Reactivity	250	mg/kg	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A
Sulfide Reactivity	500	mg/kg	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A
Ignitability	140	F	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A
Corrosivity (NACE)	0.25	in/yr	Drum Liquid	8 oz. glass, full	none	7 days	30	N/A	N/A	N/A	N/A

Container type and volume values are subject to change depending on the type of drum liquid found once drums are opened.

Table 3 : QA/QC Analysis and Objectives Summary

Analytical Parameter	Matrix	Analytical Method Ref.	Spikes		QA/QC	
			Matrix	Surrogate	Detection Limits	QA Objective
Corros.(Acids)	Drum Liquid	9040	0	NO	See Attached	QA-2
VOA	Drum Liquid	RAS protocols	YES	NO	See Attached	QA-2
BNA	Drum Liquid	RAS protocols	YES	NO	See Attached	QA-2
React. to water	Drum Liquid	Chap. 7 SW-846	0	NO	See Attached	QA-2
Corros.(Bases)	Drum Liquid	9040	0	NO	See Attached	QA-2
Metals	Drum Liquid	RAS protocols	YES	NO	See Attached	QA-2
Cyanide React.	Drum Liquid	Chap. 7 SW-846 9010A	0	NO	See Attached	QA-2
Sulfide React.	Drum Liquid	Chap. 7 SW-846 9030A	0	NO	See Attached	QA-2
Ignitability	Drum Liquid	1010 or 1020	0	NO	See Attached	QA-2
Corrosivity(NACE)	Drum Liquid	1110A	0	NO	See Attached	QA-2

Note: RAS protocols are SW-846 methods followed when analyses are performed using the Contract Laboratory Program (CLP).

Attachment A

2009

DRUM SAMPLING

TABLE OF CONTENTS

DRUM SAMPLING

SCOPE AND APPLICATION

The purpose of this procedure is to provide technical guidance on implementing safe and cost-effective response actions applicable to hazardous waste sites containing drums. Container contents are sampled and characterized for disposal, bulking, recycling, grouping, and/or classification purposes.

.0 METHOD SUMMARY

Prior to sampling, drums must be inventoried, staged, and opened. Inventory entails recording visual qualities of each drum and any characteristics pertinent to the contents' classification. Staging involves the organization, and sometimes consolidation of drums which have similar wastes or characteristics. Opening of closed drums can be performed manually or remotely. Remote drum opening is recommended for worker safety. The most widely used method of sampling a drum involves the use of a glass thief. This method is quick, simple, relatively inexpensive, and requires no decontamination.

.0 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

- No preservatives shall be added to the sample. See EPA/REAC SOP# 2003 on proper sample containers for wastes encountered.
- Place sample container in two ziplock plastic bags.
- Place each bagged container in a 1-gallon covered can containing absorbent packing material. Place lid on can.
- Mark the sample identification number on the outside of the can.
- Place the marked cans in a cooler and fill remaining space with absorbent packing material.
- Fill out chain of custody record for each cooler, place in plastic, and affix to inside lid of cooler.
- Secure and custody seal the lid of the cooler.
- Arrange for the appropriate transportation mode consistent with the type of hazardous waste involved.

.0 INTERFERENCES AND POTENTIAL PROBLEMS

The practice of tapping drums to determine their contents is neither safe nor effective and should not be used if the drums are visually over pressurized or if shock-sensitive materials are suspected.

Drums that have been overpressurized to the extent that the head is swollen several inches above the level of the chime should not be moved. A number of devices have been developed for venting critically swollen drums. One method that has proven to be effective is a tube and spear

device. A light aluminum tube (3 meters long) is positioned at the vapor space of the drum. A rigid, hooking device attached to the tube goes over the chime and holds the tube securely in place. The spear is inserted in the tube and positioned against the drum wall. A sharp blow on the end of the spear drives the sharpened tip through the drum and the gas vents along the grooves. The venting should be done from behind a wall or barricade. This device could be cheaply and easily designed and constructed where needed. Once the pressure has been relieved, the bung can be removed and the drum sampled.

5.0 EQUIPMENT/APPARATUS

The following are standard materials and equipment required for sampling:

- Health and Safety Plan.
- Personnel protection equipment.
- Wide-mouth glass jars with teflon cap liner, approx. 500 ml volume.
- Uniquely numbered sample identification labels with corresponding data sheets.
- One-gallon covered cans half-filled with absorbent.
- Chain of custody sheets.
- Decontamination plan and materials.
- Glass thieving tubes or COLIWASA
- Drum opening devices:

Bung Wrench

A common method for opening drums manually is using a universal bung wrench (Appendix B1). These wrenches have fittings made to remove nearly all commonly encountered bungs. They are usually constructed of cast iron, brass, or a bronze-beryllium, non-sparking alloy formulated to reduce the likelihood of sparks. The use of a "NON-SPARKING" wrench does not completely eliminate the possibility of a spark being produced.

Drum Deheader

One means by which a drum can be opened manually when a bung is not removable with a bung wrench is by using a drum deheader (Appendix B2). This tool is constructed of forged steel with an alloy steel blade and is designed to cut the lid of a drum off or part way off by means of a scissors-like cutting action. A limitation of this device is that it can be attached only to closed head drums. Drums with removable heads must be opened by other means.

Hand Pick, Pickaxe, and Hand Spike

These tools (Appendix B3) are usually constructed of brass or a non-sparking alloy with a sharpened point that can penetrate the drum lid or head when the tool is swung. The hand picks or pickaxes that are most commonly used are commercially available; whereas, the spikes are generally uniquely fabricated four foot long poles with a pointed end.

Backhoe Spike

The most common means used to open drums remotely for sampling is the use of a metal spike attached or welded to a backhoe bucket (Appendix B4). In addition to being very efficient, this method can greatly reduce the likelihood of personnel exposure.

Hydraulic Drum Opener

Recently, remotely operated hydraulic devices (Appendix B5) have been fabricated to open drums remotely. One such device is discussed here. This device uses hydraulic pressure to pierce through the wall of a drum. It consists of a manually operated pump which pressurize soil through a length of hydraulic line..

Pneumatic Devices

A pneumatic bung remover (Appendix B6) consists of a compressed air supply that is controlled by a heavy-duty, 2-stage regulator. A high pressure air line of desired length delivers compressed air to a pneumatic drill, which is adapted to turn a bung fitting selected to fit the bung to be removed. An adjustable bracketing system has been designed to position and align the pneumatic drill over the bung. This bracketing system must be attached to the drum before the drill can be operated. Once the bung has been loosened, the bracketing system must be removed before the drum can be sampled. This remote bung opener does not permit the slow venting of the container, and therefore appropriate precautions must be taken. It also requires the container to be upright and relatively level. Bungs that are rusted shut cannot be removed with this device.

5.0 REAGENTS

Decontamination of sampling equipment should follow Equipment Decontamination EPA/REAC Standard Operating Procedure #2006 and site specific work plan.

PROCEDURE

7.1 Drum Staging

Prior to sampling, the drums should be staged to allow easy access. Ideally, the staging area should be located just far enough from the drum opening area to prevent a chain reaction if one drum should explode or catch fire when opened.

During staging, the drums should be physically separated into the following categories: those containing liquids, those containing solids, lab packs, gas cylinders, and those which are empty. This is done because the strategy for sampling and handling drums/containers in each of these categories will be different. This may be achieved by:

- Visual inspection of the drum and its labels, codes, etc. Solids and sludges are typically disposed of in open top drums. Closed head drums with a bung opening generally contain liquid.
- Visual inspection of the contents of the drum during sampling, followed by restaging, if needed.

Once a drum has been excavated and any immediate hazard has been eliminated by overpacking or transferring the drum's contents, the drum is affixed with a numbered tag and transferred to a staging area. Color-coded tags, labels or bands should be used to mark similar waste types. A description of each drum, it's condition, any unusual markings, and the location where it was buried or stored are recorded on a drum data sheet (Appendix A). This data sheet becomes the principal recordkeeping tool for tracking the drum onsite.

Where there is good reason to suspect that drums containing radioactive, explosive, and shock-sensitive materials are present, these materials should be staged in a separate, isolated area. Placement of explosives and shock-sensitive materials in diked and fenced areas will minimize the hazard and the adverse effects of any premature detonation of explosives.

Where space allows, the drum opening area should be physically separated from the drum removal and drum staging operations. Drums are moved from the staging area to the drum opening area one at a time using forklift trucks equipped with drum grabbers or a barrel grappler. In a large-scale drum handling operation, drums may be conveyed to the drum opening area using a roller conveyor.

7.2 Drum Opening

There are three basic techniques available for opening drums at hazardous waste sites:

- Manual opening with nonsparking bung wrenches
- Drum deheading
- Remote drum puncturing or bung removal.

The choice of drum opening techniques and accessories depends on the number of drums to be opened, their waste contents, and physical condition. Remote drum opening equipment should always be considered in order to protect worker safety. Under OSHA 1910.120, manual drum opening with bung wrenches or deheaders should be performed ONLY with structurally sound drums and waste contents that are known to be not shock sensitive, non-reactive, non-explosive, and non-flammable.

7.2.1 MANUAL DRUM OPENING

7.2.1.1 Bung Wrench

Manual drum opening with bung wrenches should not be performed unless the drums are structurally sound (no evidence of bulging or deformation) and their contents are known to be nonexplosive. If opening the drum with bung wrenches is deemed reasonably cost-effective and safe, then certain procedures should be implemented to minimize the hazard:

- Field personnel should be fully outfitted with protective gear.
- Drums should be positioned upright with the bung up, or, for drums with bungs on the side, laid on their sides with the bung plugs up.
- The wrenching motion should be a slow, steady pull across the drum. If the length of the bung wrench handle provides inadequate leverage for unscrewing the plug, a "cheater bar" can be attached to the handle to improve leverage.

7.2.1.2 Drum Deheading

Drums are opened with a drum deheader by first positioning the cutting edge just inside the top chime and then tightening the adjustment screw so that the deheader is held against the side of the drum. Moving the handle of the deheader up and down while sliding the deheader along the chime will enable the entire top to be rapidly cut off if so desired. If the top chime of a drum has been damaged or badly dented it may not be possible to cut the entire top off. Since there is always the possibility that a drum may be under pressure, the initial cut should be made very slowly to allow for the gradual release of any built-up pressure. A safer technique would be to employ a remote method prior to using the deheader.

Self-propelled drum openers which are either electrically or pneumatically driven are available and can be used for quicker and more efficient deheading.

7.2.1.3 Hand Pick or Spike

When a drum must be opened and neither a bung wrench nor a drum deheader is suitable, then it can be opened for sampling by using a hand pick, pickaxe, or spike (Appendix B3). Often the drum lid or head must be hit with a great deal of force in order to penetrate it. Because of this, the potential for splash or spraying is greater than with other opening methods and therefore, this method of drum opening is not recommended, particularly when opening drums containing liquids. Some spikes used have been modified by the addition of a circular splash plate near the penetrating end. This plate acts as a shield and reduces the amount of splash in the direction of the person using the spike. Even with this shield, good splash gear is essential.

Since drums, some of which may be under pressure, cannot be opened slowly with these tools, spray from drums is common and appropriate safety measures must be taken. The pick or spike should be decontaminated after each drum is opened to avoid cross contamination and/or adverse chemical reaction from incompatible materials.

7.3 Drum Sampling

After the drum has been opened, preliminary monitoring of headspace gases should be performed using an explosimeter and organic vapor analyzer. Refer to EPA/REAC SOP# 2061 and 2104 for guidance on instrument use.

In most cases it is impossible to observe the contents of these sealed or partially sealed vessels. Since some layering or stratification is likely in any solution left undisturbed over time, a sample must be taken that represents the entire depth of the vessel.

When sampling a previously sealed vessel, a check should be made for the presence of a bottom sludge. This is easily accomplished by measuring the depth to apparent bottom then comparing it to the known interior depth.

7.3.1 Glass Thief Sampler

The most widely used implement for sampling is a glass tube (Glass thief, 6mm to 16mm I.D. X 48in. length). This tool is simple, cost effective, quick, and collects a sample without having to decontaminate.

Specific Sampling Procedure Using a Glass Thief

1. Remove cover from sample container.
2. Insert glass tubing almost to the bottom of the drum or until a solid layer is encountered. About 1 ft. of tubing should extend above the drum.
3. Allow the waste in the drum to reach its natural level in the tube.
4. Cap the top of the sampling tube with a tapered stopper or thumb, ensuring liquid does not come into contact with stopper.
5. Carefully remove the capped tube from the drum and insert the uncapped end in the sample container. Do not spill liquid on the outside of the sample container. Refer to EPA/REAC SOP# 2003 for selection of appropriate sample container.
6. Release stopper and allow the glass thief to drain completely into the sample container. Fill the container to about 2/3 of capacity.
7. Remove tube from the sample container, break it into pieces and place the pieces in the drum.

8. Cap the sample container tightly and place prelabeled sample container in a carrier.
9. Replace the bung or place plastic over the drum.
10. Transport sample to decontamination zone for preparation for transport to analytical laboratory.

In many instances a drum containing waste material will have a sludge layer on the bottom. Slow insertion of the sample tube down into this layer and then a gradual withdrawal will allow the sludge to act as a bottom plug to maintain the fluid in the tube. The plug can be gently removed and placed into the sample container by the use of a stainless steel lab spoon.

It should be noted that in some instances disposal of the tube by breaking it into the drum may interfere with eventual plans for the removal of its contents. The use of this technique should be cleared with the project officer or other disposal techniques evaluated.

7.3.2 COLIWASA Sampler

Designs exist for equipment that will collect a sample from the full depth of a drum and maintain it in the transfer tube until delivery to the sample bottle. These designs include primarily the Composite Liquid Waste Sampler (COLIWASA) and modifications thereof. The COLIWASA is a much cited sampler designed to permit representative sampling of multiphase wastes from drums and other containerized wastes. One configuration consists of a 152 cm by 4 cm I.D. section of tubing with a neoprene stopper at one end attached by a rod running the length of the tube to a locking mechanism at the other end. Manipulation of the locking mechanism opens and closes the sampler by raising and lowering the neoprene stopper. One model of the COLIWASA is shown in Appendix C; however, the design can be modified and/or adapted somewhat to meet the needs of the sampler.

The major drawbacks associated with using a COLIWASA concern decontamination and costs. The sampler is difficult if not impossible to decontaminate in the field and its high cost in relation to alternative procedures (glass tubes) make it an impractical throwaway item. It still has applications, however, especially in instances where a true representation of a multiphase waste is absolutely necessary.

7.2.2 Remote Opening

Remotely operated drum opening tools are the safest available means of drum opening. Remote drum opening is slow, but provides a high degree of safety compared to manual methods of opening.

7.2.2.1 Backhoe Spike

Drums should be "staged" or place in rows with adequate aisle space to allow ease in backhoe maneuvering. Once staged, the drums can be quickly opened by punching a hole in the drum head or lid with the spike.

The spike should be decontaminated after each drum is opened to prevent cross contamination. Even though some splash or spray may occur when this method is used, the operator of the backhoe can be protected by mounting a large shatter-resistant shield in front of the operator's cage. This combined with the normal personal protection gear should be sufficient to protect the operator. Additional respiratory protection can be afforded by providing the operator with an on-board airline system.

7.2.2.2 Hydraulic Devices

A piercing device with a metal point is attached to the end of a hydraulic line and is pushed into the drum by the hydraulic pressure. The piercing device can be attached so that a hole for sampling can be made in either the side or the head of the drum. Some of the metal piercers are hollow or tube-like so that they can be left in place if desired and serve as a permanent tap or sampling port. The piercer is designed to establish a tight seal after penetrating the container.

7.2.2.3 Pneumatic Devices

Pneumatically-operated devices utilizing compressed air have been designed to remove drum bungs remotely (Appendix B6).

DRUM SAMPLING

Procedures for Use

1. Put the sampler in the open position by placing the stopper rod handle in the T-position and pushing the rod down until the handle sits against the sampler's locking block.
2. Slowly lower the sampler into the liquid waste. (Lower the sampler at a rate that permits the levels of the liquid inside and outside the sampler tube to be about the same. If the level of the liquid in the sample tube is lower than that outside the sampler, the sampling rate is too fast and will result in a non-representative sample.)
3. When the sampler stopper hits the bottom of the waste container, push the sampler tube downward against the stopper to close the sampler. Lock the sampler in the closed position by turning the T-handle until it is upright and one end rests tightly on the locking block.
4. Slowly withdraw the sample from the waste container with one hand while wiping the sampler tube with a disposable cloth or rag with the other hand.
5. Carefully discharge the sample into a suitable sample container by slowly pulling the lower end of the T-handle away from the locking block while the lower end of the sampler is positioned in a sample container.
6. Cap the sample container with a Teflon-lined cap; attach label and seal; and record on sample data sheet.
7. Unscrew the T-handle of the sampler and disengage the locking block. Clean sampler.

.0 CALCULATIONS

There are no specific calculations for these procedures.

.0 QUALITY ASSURANCE/QUALITY CONTROL

The following general quality assurance procedures apply:

1. All data must be documented on standard chain-of-custody forms, field data sheets, or within field/site logbooks.
2. All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.
3. All deliverables will receive peer review prior to release.

DRUM SAMPLING

The following specific quality assurance activity will apply:

Generally, one duplicate sample is collected for every ten samples collected. Other duplicates and spikes may be required depending on particular analytical parameter requested. See the the site specific sampling plan or EPA/REAC SOP# 2005 for further QA/QC considerations.

0.0 DATA VALIDATION

The data generated will be reviewed according to the QA/QC considerations included in Section 9.0.

1.0 HEALTH AND SAFETY

The opening of closed containers is one of the most hazardous site activities. Maximum efforts should be made to ensure the safety of the sampling team. Proper protective equipment and a general awareness of the possible dangers will minimize the risk inherent to sampling operations. Employing proper drum opening techniques and equipment will also safeguard personnel. The use of remote sampling equipment whenever feasible is highly recommended.

Most drum sampling activities are performed in level B with additional splash protection. This includes:

- Protective coverall (saran Tyvek, PVC, acid suit, etc.)
- Hard hat
- SCBA
- Steel toe, steel shank boot (or latex booties covering steel toe work boots)
- Surgical gloves
- Solvent/acid resistant gloves
- Splash apron
- Face splash shield

For detailed descriptions of required levels of protection, see EPA/REAC Standard Operating Procedure # 3012, "Hazardous Waste Site Investigations" and the site specific safety plan.

2.0 REFERENCES

Guidance Document for Cleanup of Surface Tank and Drum Sites, OSWER Directive 9380.0-3.

Drum Handling Practices at Hazardous Waste Sites, EPA-600/2-86-013.

Attachment J

Quality Assurance Sampling Plan for Sampling of Monitor Wells

Sampling QA/QC Work Plan

Odessa Water Sampling

Prepared by
Ecology And Environment, Inc.

EPA Project No.: ZT1061
Contractor Work Order No.: T06-9105-07
EPA Contract No.: 68-WO-0037

Approvals

Ecology And Environment, Inc.

David Ehresmann — 5/30/91 (Date)
Project Manager

Sherri Hughes — 5/30/91 (Date)
Project Director

EPA

Greg Fife — 6/11/91 (Date)
On-Scene Coordinator

85 min
875

1.0 BACKGROUND

The [suspected] contamination is a result of:

TAT will determine if any alleged contamination has encountered the groundwater table.

The following information is known about the site:

The site (Figure 1-1) is located in the city of Odessa in the county of Ector in the state of Texas. The nearest residents are located within 50.0 feet of the site, in a west direction. Other residents or significant environments in proximity to this site are located 10 feet due west of the site.

It is a Oil Field Drum Recycling facility on 10 acres which had been operating for 17 years and is now abandoned since 1989.

The types of material(s) handled by this facility were:

acids
bases
inorganics
organics
petroleum products

The volume(s) of contaminated materials to be addressed are:

Unknown, TAT will determine if there is any contamination.

The contaminants of concern are:

TAT will have the groundwater samples tested for priority pollutants (i.e. volatiles, BNA, metals, cyanide, and phenols).

The basis of this information may be found in:

Currently, the Region 6 EPA-ERB is conducting a removal action at the site. The Region 6 TAT has conducted a site assessment at the Odessa Drum Company. Details of the site assessment can found in the TAT site assessment report dated July 26, 1990 (TDD# T06-9004-09A).

2.0 DATA USE OBJECTIVES

The objective of this project / sampling event is to determine:

the presence of contamination
the magnitude of contamination

For the purpose of:

Site characterization

The data will be evaluated against:

Federal/State Action Levels

The data will be evaluated against state and Federal Drinking water standards and will be used by EPA for enforcement purposes.

3.0 Quality Assurance Objectives

As identified in Sections 1.0 and 2.0 the objective of this project/event applies to the following parameters:

Parameters	Matrix	Intended Use Of Data	QA Objective
BNA	Ground Water	Site Characterization	QA-2
Cyanide	Ground Water	Site Characterization	QA-2
Metals	Ground Water	Site Characterization	QA-2
Phenols	Ground Water	Site Characterization	QA-2
VOA	Ground Water	Site Characterization	QA-2

4.0 Approach And Sampling Methodologies

4.1 Sampling Equipment

The following equipment will be utilized to obtain environmental samples from the respective media/matrix:

Parameter/Matrix	Sampling Equipment	Fabrication	Dedicated
BNA in Ground Water	Bailer	PVC	Yes

Parameter/Matrix	Sampling Equipment	Fabrication	Dedicated
Cyanide in Ground Water	Bailer	PVC	Yes

Parameter/Matrix	Sampling Equipment	Fabrication	Dedicated
Metals in Ground Water	Bailer	PVC	Yes

Parameter/Matrix	Sampling Equipment	Fabrication	Dedicated
Phenols in Ground Water	Bailer	PVC	Yes

Parameter/Matrix	Sampling Equipment	Fabrication	Dedicated
VOA in Ground Water	Bailer	PVC	Yes

4.2 Sampling Design

TAT will sample ground water with the aid of bailers from the (4) ground water monitoring wells that will be installed onsite. Each monitoring well will have its own dedicated PVC bailer, which will remain inside each well. (See Figure 4-1).

4.3 Standard Operating Procedures

4.3.1 Sample Documentation

4.4.1 Field Activity and Sample Documentation

Field data and information on work activities during this project will be recorded

by TAT personnel in the field log book consistent with E & E SOP-Field Activity Logbooks, GENTECH 4.1. All Chain of Custody Seals, Tags and Records must be completed in accordance with E & E SOP Laboratory and Field Personnel Chain-of-Custody Documentation and Quality Assurance\Quality Control Procedures Manual, December 1984. All EPA Contract Laboratory Program (CLP) samples must adhere to additional requirements including the organic and inorganic trafficking reports described in the User's Guide to the Contract Laboratory Program. All sample documents must be completed legibly in ink. Any corrections or revisions must be made by lining through the incorrect entry and by initialing and dating the error.

4.3.2 Sampling SOP's

Groundwater Well Sampling

Prior to sampling each well, the well will be purged. For this project, this will be accomplished with a bailer.

Brush off well cap prior to opening, unlock and open well cap. A photoionization detector (HNU) will be used on the escaping gases to determine the need for respiratory protection. Using a decontaminated water level indicator, the water level will be measured to the nearest 0.1 foot. Total depth of the well will be obtained with a depth sounder and the volume of water in the well will be calculated using the following procedure:

Well Volume = nr2h (7.48 gal/ft3)

Where:n = pi
r = radius of well casing in feet.
h = height of water column of well from water level.
7.48 = conversion from ft3 to number of gallons.

Three well volumes at a minimum should be purged if possible. Each well will have its own bailer.

Should the well yield be insufficient to produce the requisite three volumes, bailing will continue to the point of well evacation then terminated and the well will be sampled upon recharge.

Once bailing is completed and the correct laboratory-cleaned sample jars and/or vials have been prepared, sampling will proceed. Sampling will occur in a progression from the least to most contaminated well, if known.

The water sample will be collected using a PVC bailer. The bailer will be attached to a clean, dedicated, nylon rope and introduced into the well. The bailer will be lowered to the approximate mid-point of the screened interval. Once the sample is collected, care will be taken not to unduly agitate or aerate the water while pouring into the appropriate sample containers.

The conductivity, temperature, and pH of the groundwater will be measured in a separate container. All measurements will be recorded in the field notebook.

4.3.3 Sample Handling and Shipment

Each of the sample bottles will be sealed and labeled according to the following protocol. Caps will be secured with custody seals. Bottle labels will contain all required information including sample number, time and date of collection, analysis requested, and preservative used. Sealed bottles will be placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite.

All sample documents will be affixed to the underside of each cooler lid.

For further information see the E & E SOP-Laboratory and Field Personnel Chain-Of-Custody Documentation and Quality Assurance/Quality Control Procedures Manual.

4.4 Schedule of Activities

Table 1: Proposed Schedule of Work

Activity	Start Date	End Date
Mobilization to the site	06/03/91	06/03/91
Begin monitoring well drilling	06/04/91	06/14/91
Sampling of the 4 wells	06/05/91	06/10/91

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The EPA On-Scene Coordinator, Greg Fife, will provide overall direction to Ecology And Environment, Inc. staff concerning project sampling needs, objectives and schedule.

The Ecology And Environment, Inc. Project Manager, David Ehresmann, is the primary point of contact with the EPA On-Scene Coordinator. The PM is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables.

The Ecology And Environment, Inc. Site QC Coordinator, David Ehresmann, is responsible for ensuring field adherence to the Sampling QA/QC Plan and recording any deviations. The Site QC Coordinator is also the primary project team contact with the lab.

The following sampling personnel will work on this project:

Personnel	Responsibility
David Ehresmann	Project Manager
Chris Quina	Sampler,SSO,PD DJE 6/11/91
Sherri Hughes	~~Project Director~~
Martha Rutledge	Sampler,SSO
Greg Fife	OSC

The following laboratories will be providing the following analyses:

Lab Name / Location	Lab Type	Parameters
Ecology And Environment, Inc. Buffalo, New York	Analytical	BNA, VOA, Metals, Phenols, Cyanide

6.0 QUALITY ASSURANCE REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0:

The following QA Protocols for QA-2 data are applicable to all sample matrices and include:

1. Provide sample documentation in the form of field logbooks, the appropriate field data sheets and chain of custody forms. Chain of custody sheets are optional for field screening locations.

2. All instrument calibration and/or performance check procedures/methods will be summarized and documented in the field/personal or instrument log notebook.

3. The detection limit will be determined and recorded, along with the data, where appropriate.

4. Document sample holding times; this includes documentation of sample collection and analysis dates.

5. Provide initial and continuing instrument calibration data.

6a. For soil, sediment and water samples, include rinsate blanks and trip blanks.

7. Performance Evaluation samples are optional, if available.

8. Choose any one or any combination of the following three options:

1. Definitive identification

   Unscreened data - confirm the identification of analytes via an EPA-approved method on all unscreened environmental samples; provide documentation such as gas chromatograms, mass spectra, etc.

2. Non-definitive quantitation

   Unscreened data - provide documentation of quantitative results.

7.0 DELIVERABLES

The Ecology And Environment, Inc. Project Manager, David Ehresmann, will maintain contact with the EPA On-Scene Coordinator, Greg Fife, to keep him informed about the technical and financial progress of this project. This communication will commence with the issuance of the work assignment and project scoping meeting. Activities under this

project will be reported in the analytical report and the final report described herein. Activities will also be summarized in appropriate format for inclusion in monthly and annual reports.

The following deliverables will be provided under this project:

Analytical Report
Draft Final Report

A (draft) final report will be prepared, by the TAT to correlate available background information with data generated under this sampling event. Appropriate maps, figures, and attachments will supplement the written report.

8.0 DATA VALIDATION

QA 2

Data generated under this QA/QC Sampling Plan will be evaluated accordingly with appropriate criteria contained in the Removal Program Data Validation Procedures which accompany OSWER Directive #9360.4-1.

Specific data review activities for QA 2 should performed by the follwing approach:

1. Of the samples collected in the field, 10% will be confirmed for identification, precision, accuracy, and error determination.

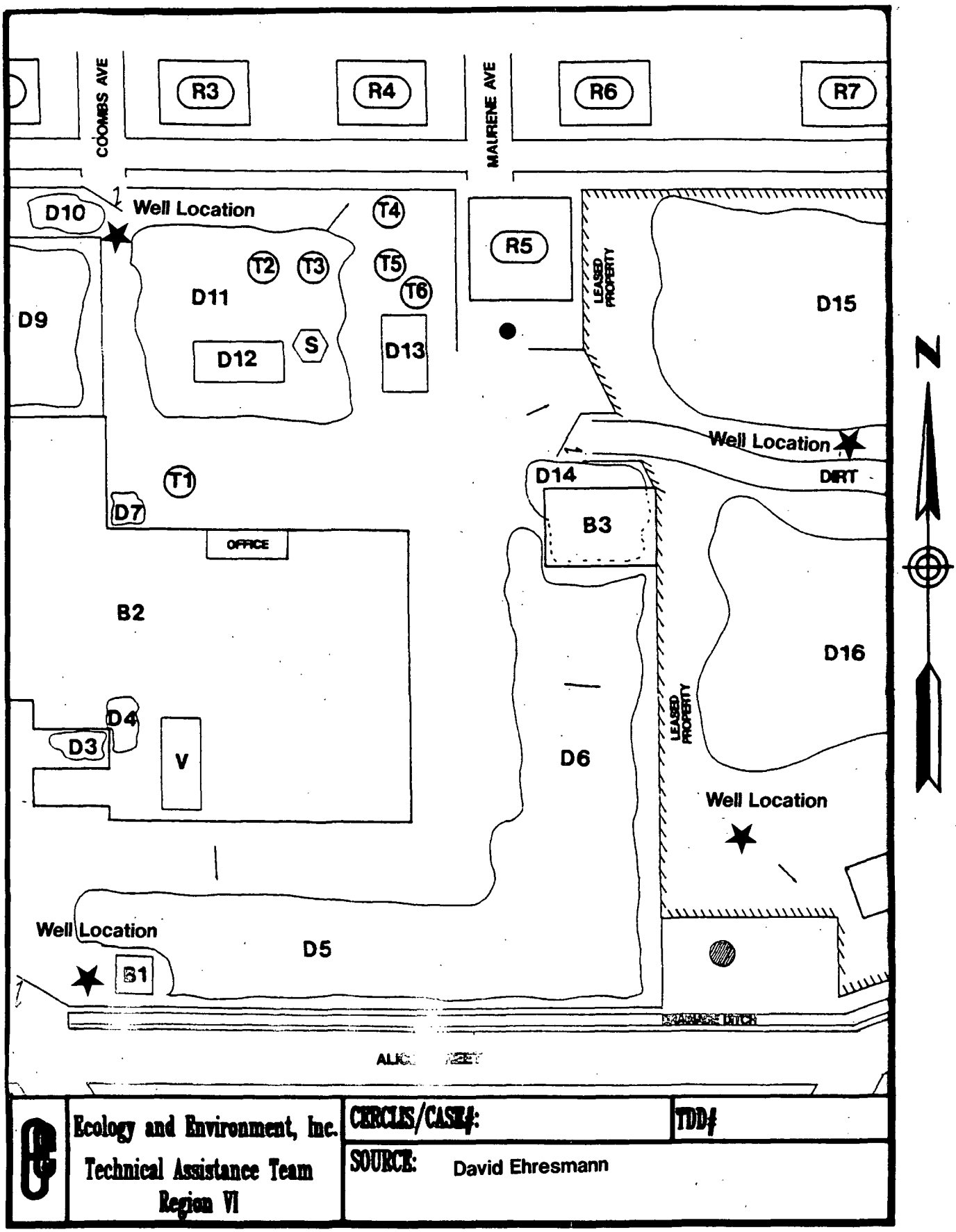
2. The results of 10% of the samples in the analytical data packages should be evaluated for holding times, blank contamination, spike (surrogate/matrix) recovery, and detection capability.

3. The holding times, blank contamination, and detection capability will be reviewed for the remaining samples.

Ecology and Environment, Inc. Technical Assistance Team Region VI	CERCLIS/CASE#:	TDD#
	SOURCE: David Ehresmann Odessa NW Quadrangle	

Odessa Water Sampling

Figure 1-1 Site Location Map



Odessa Water Sampling

Figure 4-1 Sample Location Map

Table 2 : Field Sampling Summary

Analytical Parameter	Level of Sensivity	Matrix	Container Type Volume, Quantity	Preserv-ative	Holding Times	Subtotal Samples	QC Extras: Rinsate Blanks	QC Extras: Trip Blanks (VOA's)	QC Extras: QC Pos.	QC Extras: Matrix Spikes	Total Field Samples
BNA	1 ppb 0	Ground Water	32 oz amber glass (2)	4xC	7/40 days	4 (0)C	N/A 0	N/A N/A	N/A 0	2	6
Metals	1 ppb 0	Ground Water	1 l glass or polyethylene	4xC	6 month	4 (0)C	N/A 0	N/A N/A	N/A 0	2	6
VOA	1 ppb 0	Ground Water	40 ml vial (3)	4xC	7 days	4 (0)C	N/A 0	N/A 0	N/A 0	2	6
Phenols	1 ppb 0	Ground Water	1 l amber glass (1)	4xC	28 days	4 (0)C	N/A 0	N/A N/A	N/A 0	2	6
Cyanide	1 ppb 0	Ground Water	1 l polyethylene			4 (0)C	N/A 0	N/A N/A	N/A 0	2	6

(C) - refers to confirmation samples

Table 3 : QA/QC Analysis and Objectives Summary

Analytical Parameter	Matrix	Analytical Method Ref.	Spikes		QA/QC	
			Matrix	Surrogate	Detection Limits	QA Objective
BNA	Ground Water	SW-846 8270	YES	YES	See Attached	QA-2
Metals	Ground Water	SW-846 6010	YES	YES	See Attached	QA-2
Arsenic	Ground Water	SW-846 7421	YES	YES	See Attached	QA-2
Lead	Ground Water	SW-846 7421	YES	YES	See Attached	QA-2
Mercury	Ground Water	SW-846 7470	YES	YES	See Attached	
Selenium	Ground Water	SW-846 7740	YES	YES	See Attached	
Thallium	Ground Water	SW-846 7841	YES	YES	See Attached	
VOA	Ground Water	SW-846 8240	YES	YES	See Attached	QA-2
Phenols	Ground Water	SW-846 9065	YES	YES	See Attached	QA-2
Cyanide	Ground Water	SW-846 9010	YES	YES	See Attached	QA-2

Attachment K

CLP Laboratory Requests

Circle the appropriate contract:
FIT, REM, (TAT), TES, ARCS, Other _____

CASE/SAS _____

REGION 6
CLP SAMPLE REQUEST FORM

This Form must be completed whenever CLP analytical services are requested. The RSCC will not process any requests for CLP lab space unless this Form is signed and dated by an EPA Project Officer, RPM or OSC.

SITE NAME: Odessa Drum Company **LOCATION:** Odessa, Ector County, TX **EPA ID** TXD098122554

TYPE OF INVESTIGATION: ( ) SSI ( ) LSI ( ) HRSS ( ) RI/FS ( ) RA (X) **OTHER** Site Assessment

SAMPLING ORGANIZATION: Ecology & Environment **CONTACT:** Vera R. Henry **TEL:** 214-742-6601

SUBCONTRACTOR: _____ **CONTACT:** _____ **TEL:** _____

SHIPPING CONTACT/SAMP. TEAM LEADER: Vera R. Henry **ON SITE TEL:** 915-367-3045

SAMPLING DATE: Week of 4/29/91 5/6/91 **SHIPPING DATE:** Week of 4/29/91 **SPILL ID #** _____

SIGNED BY EPA PO/RPM/OSC: _____ **MAIL CODE:** 6E-ES **DATE:** 4/17/91 **TEL:** (214)655-2275

NOTIFICATION STATUS: Initial (Initial or revised) **TURNAROUND TIME:** 35 days

---

RAS ANALYSES REQUESTED (Submit to RSCC on Wednesdays by 11:00 AM of week prior to sampling)

	LOW WATERS	MED WATERS	LOW SOILS	MED SOILS	DRINKING H2O SAMP.	OTHER (Describe)
TCL ORG.						
VOA						
BNA						
PEST/PCB						
2,3,7,8 TCDD						
TCL METALS						
TCL METALS & CN						

HIGH CONC./OILY SAMPLES (For RAS analyses & RAS trnd time submit to RSCC one (1) week prior to sampling date, otherwise follow SAS instructions)

NO. OF SAMPLES	MATRIX	CONC.	SOURCE	ANALYSES

SAS ANALYSES REQUESTED (Submit this Form in addition to the Special Analytical Request Form to the RSCC four (4) weeks prior to the sampling date)

NO. OF SAMPLES	MATRIX	CONC.	SOURCE	ANALYSES
30	liquid		drums	TCL VOA and ABN fraction
30	Liquid		drums	TAL metals
30	liquid		drums	Corrosivity, Ignitability and Reactivity
				(See Attached SAS Request)

Comments: (+)

Case # _____

SAS Number

U.S.ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
300 North Lee St., Suite 200
Alexandria, Va. 22134
Phone: 703/557-2490
To: Blake Henke

SPECIAL ANALYTICAL SERVICES
Client Request

A. EPA Region/Client: Region VI

B. RSCC Representative: Myra I. Perez

C. Telephone # : (713) 983-2130

D. Date of Request: 04/17/91

E. Site Name: Odessa Drum Com.- Odessa, Tx.

Please provide below description of your request for Special Analytical Services under the Contract Laboratory Program. In order to most efficiently obtain laboratory capability for your request, please address the following consideration if applicable. Incomplete or erroneous information may result in a delay in the processing of your request. Please continue response on additional sheets, or attach supplementary information as needed

1. General description of analytical service requested:

   TCL VOAs and BNA analysis.

2. Definition and number of work units involved (specify whether whole samples or fractions; whether organics or inorganics; whether aqueous or soil and sediments; and whether low, medium or high concentration.

   30 samples from drums for TCL VOAs and BNA analysis.

   If sample is a single phase aqueous sample, a single phase oil sample or a solid sample, the lab will analyze for TCL VOAs and BNAs.

   For samples containing an aqueous and an oil phase, the lab will analyze the oil phase only, for TCL VOAs and BNAs. The aqueous phase will not be analyzed.

   For samples containing an aqueous and a solid phase, the lab will analyze the solid phase only, for TCL VOAs and BNAs. The aqueous phase will not be analyzed.

   For samples containing a solid and an oil phase, both phases will be analyzed for TCL VOAs and BNAs.

   For samples containing all three phases, the solid and oil phase will be analyzed for TCL VOAs and BNAs. The aqueous phase will not be analyzed.

3. Purpose of analysis (specify whether Superfund (enforcement or remedial action), RCRA, NPDES, ect.), site spill ID number (if Any).

   Emergency Response - Enforcement. Site Spill ID = Z2

4. Estimated date(s) of collection:

   Week of May 6, 1991.

5. Estimated date(s) and method of shipment:

   Week of May 6, 1991 ; overnight delivery

6. Number of days analysis and data required after laboratory receipt of samples:

   35 days after receipt by lab. The lab(s) must notify SMO immediately of any problems encountered during analysis that will delay submission of the data. SMO will contact the TPO to request instructions.

7. Analytical protocol required (attach copy if other than a protocol currently used in this program):

   VOAs & BNAs - Analyze all solid and oil phase samples by the High Concentration Protocol. Report screening results to SMO immediately if low/medium levels of TCL compounds are detected. SMO will notify the TPO and request instructions.

8. Special technical instructions (if outside protocol requirements, specify compound names, CAS numbers, detection limits, ect.): None.

9. Analytical results required (if known, specify format for data sheets, QA/QC reports, Chain-of-Custody documentation, ect.) If not completed, format of results will be left to program discretion.

   Data format must be consistent with and equivalent to the most current High Concentration Protocol.

   Include submission of all deliverables, all methods used for prep/digestion through analysis, all calibrations, all raw data (analysis and reanalysis, undiluted and diluted sample data) and reduced data for all analysis of the field and lab QC samples, all instrument detection limits (IDL's & MDL's) and calculated method detection limits for all analyses, all QA/QC data presented in summary form and all data reduction procedures.

   Bench records, tabulated order of calibration standards, verification and control standards, samples, blanks, matrix spikes, ect. with resulting peak height, concentration or absorbance readouts will be provided with copies of worksheets used to calculate the results. A photocopy of instrument readouts, i.e. stripcharts, printer tapes, etc., must be included with all results.

9. Cont.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QA Audit results. EPA QC reference samples, or any other reference sample or initial calibration verification, will be identified as to source, lot number, and sample number. Corresponding "true" or target values and associated 95% confidence limits for analysis results will be provided for all reference samples used.

A narrative summary of all procedures actually used for sample preparation, cleanup, and analysis, including:

1- Specific identification of all instruments used;

2- Discussion of all factors affecting the analysis and all corrective actions taken;

3- Justification for dilution(s) of all samples or extracts and/or digestates;

4- A summary of the source and reasons for varience from this request (e.g., method changes) including phone log communications.

5- Report any inconsistencies and/or problems with paperwork, shipping and packaging of samples.

10. Other (use additional sheets or attach supplementary information, as needed)

Report any problems with paperwork, shipping and packaging of samples immediately to SMO. SMO will report to the RSCC.

Submit copy of SAS Client Request Form and of any Record of Communication, generated during the analysis of these samples, between the lab, SMO and/or the TPO. This is considered a deliverable item. If not included in the data package(s), the data package(s) will be considered incomplete and SMO will be notified. The lab(s) should forward the Regional data package(s)

to: Data Reviewer
USEPA Houston Branch
10625 Fallstone Rd.
Houston, Tx. 77099

11. Name of sampling/shipping contact:

Greg Fife / EPA / (214) 655-2275

Vera Henry / TAT / (214) 742-6601

12. Data requirements

Parameter	Detection limit	Precision desired
TCL VOAs	As per Protocol	As per Protocol
TCL BNAs	" "	" "

13. QC Requirements

Audits required	Frequency of audits	Limits (% or concent)
As per Protocol	same	same

14. Actions required if limits are exceeded

Contact SMO immediately. SMO will contact the TPO and request instructions.

Reviewed by: M. Elfeky
M. Elfeky, Acting TPO

Date: 4/18/91

Case # _____

SAS Number

U.S.ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
300 North Lee St., Suite 200
Alexandria, Va. 22134
Phone: 703/557-2490
To: Blake Henke

SPECIAL ANALYTICAL SERVICES
Client Request

A. EPA Region/Client: Region VI

B. RSCC Representative: Myra I. Perez

C. Telephone # : (713) 983-2130

D. Date of Request: 04/17/91

E. Site Name: Odessa Drum Com.- Odessa, Tx.

Please provide below description of your request for Special Analytical Services under the Contract Laboratory Program. In order to most efficiently obtain laboratory capability for your request, please address the following consideration if applicable. Incomplete or erroneous information may result in a delay in the processing of your request. Please continue response on additional sheets, or attach supplementary information as needed

1. General description of analytical service requested:

   TAL metals.

2. Definition and number of work units involved (specify whether whole samples or fractions; whether organics or inorganics; whether aqueous or soil and sediments; and whether low, medium or high concentration.

   30 samples from drums for TAL metals.

   If sample is a single phase aqueous sample, a single phase oil sample or a solid sample, the lab will analyze for TAL metals

   For samples containing an aqueous and an oil phase, the lab will analyze the oil phase only, for TAL metals. The aqueous phase will not be analyzed.

   For samples containing an aqueous and a solid phase, the lab will analyze the solid phase only, for TAL metasl. The aqueous phase will not be analyzed.

   For samples containing a solid and an oil phase, both phases will be analyzed for TAL metals.

   For samples containing all three phases, the solid and oil phases will be analyzed for TAL metals. The aqueous phase will not be analyzed.

3. Purpose of analysis (specify whether Superfund (enforcement or remedial action), RCRA, NPDES, ect.), site spill ID number (if Any).

   Emergency Response - Enforcement. Site Spill ID =

4. Estimated date(s) of collection:

   Week of May 6, 1991.

5. Estimated date(s) and method of shipment:

   Week of May 6, 1991 ; overnight delivery

6. Number of days analysis and data required after laboratory receipt of samples:

   35 days after receipt by lab. The lab(s) must notify SMO immediately of any problems encountered during analysis that will delay submission of the data. SMO will contact the TPO to request instructions.

7. Analytical protocol required (attach copy if other than a protocol currently used in this program):

   TAL metals - Analyze all solid and oil phase samples by the Low/Medium RAS Protocol (3/90). See attachment.

8. Special technical instructions (if outside protocol requirements, specify compound names, CAS numbers, detection limits, ect.): None.

9. Analytical results required (if known, specify format for data sheets, QA/QC reports, Chain-of-Custody documentation, ect.) If not completed, format of results will be left to program discretion.

   Data format must be consistent with and equivalent to the RAS IFB Inorganic Protocol (3/90).

   Include submission of all deliverables, all methods used for prep/digestion through analysis, all calibrations, all raw data (analysis and reanalysis, undiluted and diluted sample data) and reduced data for all analysis of the field and lab QC samples, all instrument detection limits (IDL's & MDL's) and calculated method detection limits for all analyses, all QA/QC data presented in summary form and all data reduction procedures.

   Bench records, tabulated order of calibration standards, verification and control standards, samples, blanks, matrix spikes, ect. with resulting peak height, concentration or absorbance readouts will be provided with copies of worksheets used to calculate the results. A photocopy of instrument readouts, i.e. stripcharts, printer tapes, etc., must be included with all results.

9. Cont.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QA Audit results. EPA QC reference samples, or any other reference sample or initial calibration verification, will be identified as to source, lot number, and sample number. Corresponding "true" or target values and associated 95% confidence limits for analysis results will be provided for all reference samples used.

A narrative summary of all procedures actually used for sample preparation, cleanup, and analysis, including:

1- Specific identification of all instruments used;

2- Discussion of all factors affecting the analysis and all corrective actions taken;

3- Justification for dilution(s) of all samples or extracts and/or digestates;

4- A summary of the source and reasons for varience from this request (e.g., method changes) including phone log communications.

5- Report any inconsistencies and/or problems with paperwork, shipping and packaging of samples.

10. Other (use additional sheets or attach supplementary information, as needed)

Report any problems with paperwork, shipping and packaging of samples immediately to SMO. SMO will report to the RSCC.

Submit copy of SAS Client Request Form and of any Record of Communication, generated during the analysis of these samples, between the lab, SMO and/or the TPO. This is considered a deliverable item. If not included in the data package(s), the data package(s) will be considered incomplete and SMO will be notified. The lab(s) should forward the Regional data package(s)

to: Data Reviewer
USEPA Houston Branch
10625 Fallstone Rd.
Houston, Tx. 77099

11. Name of sampling/shipping contact:

Greg Fife / EPA / (214) 655-2275

Vera Henry / TAT / (214) 742-6601

12. Data requirements

Parameter	Detection limit	Precision desired
TAL metals	As per Protocol	As per Protocol

13. QC Requirements

Audits required	Frequency of audits	Limits (% or concent)
As per Protocol	same	same

See attachment

14. Actions required if limits are exceeded

Contact SMO immediately. SMO will contact the TPO and request instructions.

Reviewed by: M. Elféky
M. Elféky, Acting TPO

Date: 4/18/91

Attachment

FOR OILY SAMPLES

Preparation and Analysis Protocol for oily Samples (Metals)

Use IFB Protocol (7/88). Acid Digestion of sediments, sludges and soils, using additional nitric acid and hydrogen peroxide with additional reflux time as necessary to digest all oily material.

Analyze digestates by IFB Protocols. This is applicable to all metals as noted in the IFB. For Mercury, use EPA Method 245.5 in sediment, EPA Methods for Chemical Analysis of Water and Wastes, March 1983.

a) Analytical results - follow IFB (RAS) Protocol

b) Detection limits - follow IFB Protocol

c) QC Requirements - follow IFB Protocol

d) Action required if limits are exceeded - follow IFB Protocol. Contact Blake Henke from SMO.

e) Turnaround time - 35 days from receipt

f) Documentation - as per IFB Protocol and SAS request.

TAL

U.S.ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
300 North Lee St., Suite 200
Alexandria, Va. 22134
Phone: 703/557-2490
To: Blake Henke

Case # _____

SAS Number

SPECIAL ANALYTICAL SERVICES
Client Request

A. EPA Region/Client: Region VI

B. RSCC Representative: Myra I. Perez

C. Telephone # : (713) 983-2130

D. Date of Request: 04/17/91

E. Site Name: Odessa Drum Com.- Odessa, Tx.

Please provide below description of your request for Special Analytical Services under the Contract Laboratory Program. In order to most efficiently obtain laboratory capability for your request, please address the following consideration if applicable. Incomplete or erroneous information may result in a delay in the processing of your request. Please continue response on additional sheets, or attach supplementary information as needed

1. General description of analytical service requested:

   Corrosivity, Ignitability and Reactivity.

2. Definition and number of work units involved (specify whether whole samples or fractions; whether organics or inorganics; whether aqueous or soil and sediments; and whether low, medium or high concentration.

   30 samples from drums for corrosivity, reactivity and ignitability tests.

   If sample is a single phase aqueous sample or a single phase oil sample, the lab will test the sample for corrosivity, reactivity and ignitability.

   If sample is a single phase solid, the lab will test for reactivity.

   For samples containing an aqueous and an oil phase, the lab will analyze the oil phase for corrosivity, reactivity and ignitability. The aqueous phase will be analyzed for corrosivity only.

   For samples containing an aqueous and a solid phase, the lab will analyze the solid phase for reactivity. The aqueous phase will be analyzed for corrosivity only.

   For samples containing a solid and an oil phase, the oil phase will be analyzed for corrosivity, reactivity and ignitability. The solid phase will be analyzed for reactivity only.

   For samples containing all three phases, the oil will be analyzed for all three parameters, the aqueous phase for corrosivity only, and the solid phase for reactivity only.

3. Purpose of analysis (specify whether Superfund (enforcement or remedial action), RCRA, NPDES, ect.), site spill ID number (if Any).

   Emergency Response - Enforcement. Site Spill ID = Z2

4. Estimated date(s) of collection:

   Week of May 6, 1991.

5. Estimated date(s) and method of shipment:

   Week of May 6, 1991 ; overnight delivery

6. Number of days analysis and data required after laboratory receipt of samples:

   35 days after receipt by lab. The lab(s) must notify SMO immediately of any problems encountered during analysis that will delay submission of the data. SMO will contact the TPO to request instructions.

7. Analytical protocol required (attach copy if other than a protocol currently used in this program):

   Corrosivity - Analyze all aqueous phases as described in Chapter 7 of SW-846, using Method 9040. For non-aqueous phases use Method 1110A.

   Ignitability - Analyze all liquid phases/samples as described in Chapter 7 of SW-846, using either Method 1010 or 1020.

   Reactivity - Analyze all phases as described in Chapter 7 of SW-846, using Method 9010A to analyze for cyanide and Method 9030A to analyze for sulfide.

8. Special technical instructions (if outside protocol requirements, specify compound names, CAS numbers, detection limits, ect.): None.

9. Analytical results required (if known, specify format for data sheets, QA/QC reports, Chain-of-Custody documentation, ect.) If not completed, format of results will be left to program discretion.

   Data format must be consistent with and equivalent to the RAS IFB. (3/90).

   Include submission of all deliverables, all methods used for prep/digestion through analysis, all calibrations, all raw data (analysis and reanalysis, undiluted and diluted sample data) and reduced data for all analysis of the field and lab QC samples, all instrument detection limits (IDL's & MDL's) and calculated method detection limits for all analyses, all QA/QC data presented in summary form and all data reduction procedures.

9. Cont.

Bench records, tabulated order of calibration standards, verification and control standards, samples, blanks, matrix spikes, ect. with resulting peak height, concentration or absorbance readouts will be provided with copies of worksheets used to calculate the results. A photocopy of instrument readouts, i.e. stripcharts, printer tapes, etc., must be included with all results.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QA Audit results. EPA QC reference samples, or any other reference sample or initial calibration verification, will be identified as to source, lot number, and sample number. Corresponding "true" or target values and associated 95% confidence limits for analysis results will be provided for all reference samples used.

A narrative summary of all procedures actually used for sample preparation, cleanup, and analysis, including:

1- Specific identification of all instruments used;
2- Discussion of all factors affecting the analysis and all corrective actions taken;
3- Justification for dilution(s) of all samples or extracts and/or digestates;
4- A summary of the source and reasons for varience from this request (e.g., method changes) including phone log communications.
5- Report any inconsistencies and/or problems with paperwork, shipping and packaging of samples.

10. Other (use additional sheets or attach supplementary information, as needed)

Report any problems with paperwork, shipping and packaging of samples immediately to SMO. SMO will report to the RSCC.

Submit copy of SAS Client Request Form and of any Record of Communication, generated during the analysis of these samples, between the lab, SMO and/or the TPO. This is considered a deliverable item. If not included in the data package(s), the data package(s) will be considered incomplete and SMO will be notified. The lab(s) should forward the Regional data package(s)

to: Data Reviewer
USEPA Houston Branch
10625 Fallstone Rd.
Houston, Tx. 77099

11. Name of sampling/shipping contact:

Greg Fife / EPA / (214) 655-2275
Vera Henry / TAT / (214) 742-6601

12. Data requirements

Parameter	Detection limit	Precision desired
Corrosivity	As per method	
Ignitability	" "	
Reactivity	" "	

13. QC Requirements

Audits required	Frequency of audits	Limits (% or concent)
Duplicates: Ignitability, corrosivity, reactivity	(5%) 1 per 20 per phase (sample)	none specified

14. Actions required if limits are exceeded

Contact SMO immediately. SMO will contact the TPO and request instructions.

Reviewed by: M. Elfeky
M. Elfeky, Acting TPO

Date: 4/18/91

Case # _____

SAS Number

U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
209 Madison Str. Alexandria, Va. 22134
Phone: 703/557-2490
To: Diane Cutler

SPECIAL ANALYTICAL SERVICES
Client Request

A. EPA Region/Client: Region VI

B. RSCC Representative: Myra I. Perez

C. Telephone # : (713) 983-2130

D. Date of Request: April 5, 1991

E. Site Name: Odessa Drum Company, Odessa Texas

Please provide below description of your request for Special Analytical Services under the Contract Laboratory Program. In order to most efficiently obtain laboratory capability for your request, please address the following considerations, if applicable. Incomplete or erroneous information may result in a delay in the processing of your request. Please continue response on additional sheets, or attach supplementary information as needed.

1. General description of analytical service requested:

Analysis of drum samples for TCL VOA and ABN fractions, TAL metals, corrosivity, ignitability and reactivity.

2. Definition and number of work units involved (specify whether whole samples or fractions; whether organics or inorganics; whether aqueous or soil and sediments, and whether low, medium or high concentration).

Thirty samples from drums. Samples may be single phase aqueous or organic or two phase aqueous and organic. Aqueous samples will be low or medium concentration in organics and metals. Organic phase samples will be high concentration in organics but low concentration in metals.

3. Purpose of analysis (specify whether Superfund (enforcement or remedial action), RCRA, NPDES, etc.):

Superfund enforcement.

4. Estimated date(s) of collection:

Week of April 29, 1991.

5. Estimated date(s) and method of shipment:

Date of collection via overnight air express.

6. Number of days analysis and data required after laboratory receipt of samples:

Thirty-five (35) days after receipt of the final sample by the laboratory.

7. Analytical protocol required (attach copy if other than a protocol currently used in this program):

Aqueous samples are to be analyzed using current low/medium concentration RAS water (VOA and ABN fractions and metals) protocols. Organic phase samples are to be analyzed for organics (VOA and ABN fractions) using high concentration protocols. Organic phase samples for metals are to be analyzed using low concentration RAS soil protocols, using additional nitric acid and hydrogen peroxide to digest the sample, if necessary. If the sample contains both aqueous and organic phases, only the organic phase is to be analyzed by the laboratory.

Corrosivity - Analyze as described in Chapter 7 of SW-846 using Method 9040 for aqueous samples and Method 1110A for non-aqueous samples.

Ignitability - Analyze as described in Chapter 7 of SW-846 using either Method 1010 or Method 1020.

Reactivity - Analyze as described in Chapter 7 of SW-846 using Method 9010A to analyze for cyanide and Method 9030A to analyze for sulfide.

8. Special technical instructions (if outside protocol requirements, specify compound names, CAS numbers, detection limits, etc.):

None.

9. Analytical results required (if known, specify format for data sheets, QA/QC reports, Chain-of Custody documentation, etc.). If not completed, format of results will be left to program discretion.

Analytical results must be reported in the format indicated in the Protocols.

9. Continued
SAS data packages must include submission of all deliverables, all methods used for prep/digestion through analysis, all calibrations, all raw data (analysis and re-analysis, undiluted and diluted sample data) and reduced data for all analysis of the field and lab QC samples, all instrument detection limits (IDL's) and calculated method detection limits (MDL's) for all analyses, all QA/QC data presented in summary form and all data reduction procedures.

Bench records, tabulated order of calibration standards, verification and control standards, samples, blanks, matrix spikes, etc. with resulting peak height, concentration or absorbance readouts will be provided with copies of worksheets used to calculate results. A photocopy of instrument readouts, i.e. stripcharts, printer tapes, etc., must be included with all results.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QA Audit results. EPA QC reference samples, or any other reference sample or initial calibration verification, will be identified as to source, lot number, and sample number. Corresponding "true" or target values and associated 95% confidence limits for analysis results will be provided for all reference samples used.

A narrative summary of all procedures actually used for sample preparation, cleanup and analysis, including:

1- Specific identification of all instruments used;
2- Discussion of all factors affecting the analysis and all corrective actions taken;
3- Justification for dilution(s) of all samples or extracts and/or digestates;
4- A summary of the source and reasons for varience from this request (e.g., method changes) including phone log communications;
5- Report any inconsistencies and/or problems with paperwork, shipping and packaging of the samples.

10. Other (use additional sheets or attach supplementary information, as needed):

Report any problems with paperwork, shipping and packaging of saples immediately to SMO. SMO will report to the RSCC.

Submit copy of SAS Client Request Form and of any Record of Communication generated during the analysis of these samples, between the lab, SMO and/or the TPO. This is considered a deliverable item. If not included in the data package(s), the data package(s) will be considered incomplete and SMO

10. Continued
will be notiied. The lab(s) should forward the regional data packages to

Data Reviewer
USEPA Houston Branch
10625 Fallstone Rd.
Houston, Tx. 77099

11. Name of sampling/shipping contact:

Vera Henry (214) 742-6601 TAT

12. Data requirements:

Parameter	Detection limit	Precision desired

See protocols.

13. QC requirements

Audits required	Frequency of audits	Limits (% or content)

See protocols.

14. Action requited if limits are exceeded:

Contact Blake Henke at SMO immediately. SMO will contact the DPO and request instructions.

Please return this request to the Sample Management Office as soon as possible to expedite processing of your request for special analytical services. Should you have any questions or need any assistance, please contact your Regional Representative at the Sample Management Office.

Case # _____

SAS Number

U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
209 Madison Str. Alexandria, Va. 22134
Phone: 703/557-2490
To: Blake Henke

SPECIAL ANALYTICAL SERVICES
Client Request

A. EPA Region/Client: Region VI

B. RSCC Representative: Myra I. Perez

C. Telephone # : (713) 983-2130

D. Date of Request: April 5, 1991

E. Site Name: Odessa Drum Company, Odessa Texas

Please provide below description of your request for Special Analytical Services under the Contract Laboratory Program. In order to most efficiently obtain laboratory capability for your request, please address the following considerations, if applicable. Incomplete or erroneous information may result in a delay in the processing of your request. Please continue response on additional sheets, or attach supplementary information as needed.

1. General description of analytical service requested:

Analysis of drum samples for TCL VOA and ABN fractions, TAL metals, corrosivity, ignitability and reactivity.

2. Definition and number of work units involved (specify whether whole samples or fractions; whether organics or inorganics; whether aqueous or soil and sediments, and whether low, medium or high concentration).

Thirty samples from drums. Samples may be single or multiple phase. Phases may consist of aqueous, oily (organic) or solids. Aqueous phases will be low to medium concentration for organics and metals. Organic and solid phases will be high concentration for organics and low concentration of metals. Samples containing only an aqueous phase are to be analyzed for VOAs, ABNs, metals, corrosivity, ignitability and reactivity. Samples containing only an organic phase are to be analyzed for VOAs, ABNs, metals, corrosivity, ignitability and reactivity. [Samples containing only a solid phase are to be analyzed for VOAs, ABNs, metals, ~~ignitability~~ and reactivity.] For samples containing an aqueous and an organic phase, the

2. Continued:

the organic phase is to be analyzed for the parameters described above and the aqueous phase is to be analyzed for corrosivity only. For samples containing an aqueous and a solid phase, the solid phase is to be analyzed for the parameters described above and the aqueous phase is to be analyzed for corrosivity only. For samples containing an organic and a solid phase, both the phases are to be analyzed for the parameters described above. For samples containing all three phases, analyze the organic and solid phases for the parameters listed above and the aqueous phase for corrosivity only.

3. Purpose of analysis (specify whether Superfund (enforcement or remedial action), RCRA, NPDES, etc.):

Superfund enforcement.
(X) Site Spill ID → Z2
4. Estimated date(s) of collection:

Week of ~~April 29,~~ May 6 1991.

5. Estimated date(s) and method of shipment:

Date of collection via overnight air express.

6. Number of days analysis and data required after laboratory receipt of samples:

Thirty-five (35) days after receipt of the final sample by the laboratory.

7. Analytical protocol required (attach copy if other than a protocol currently used in this program):

Aqueous samples are to be analyzed using current low/medium concentration RAS water (VOA and ABN fractions and metals) protocols.

Organic and solid phase samples are to be analyzed for organics (VOA and ABN fractions) using high concentration protocols. Organic and solid phase samples for metals are to be analyzed using low concentration RAS soil protocols, using additional nitric acid and hydrogen peroxide to digest the sample, if necessary.

Corrosivity - Analyze all liquid phases as described in Chapter 7 of SW-846 using Method 9040 for aqueous samples and Method 1110A for non-aqueous samples.

7 Solid method
Ignitability - Analyze all liquid phases as described in Chapter 7 of SW-846 using either Method 1010 or Method 1020.

7. Continued:

Solids?

Reactivity - Analyze all phases as described in Chapter 7 of SW-846 using Method 9010A to analyze for cyanide and Method 9030A to analyze for sulfide.

8. Special technical instructions (if outside protocol requirements, specify compound names, CAS numbers, detection limits, etc.):

None.

9. Analytical results required (if known, specify format for data sheets, QA/QC reports, Chain-of Custody documentation, etc.). If not completed, format of results will be left to program discretion.

Analytical results must be reported in the format indicated in the Protocols.

SAS data packages must include submission of all deliverables, all methods used for prep/digestion through analysis, all calibrations, all raw data (analysis and re-analysis, undiluted and diluted sample data) and reduced data for all analysis of the field and lab QC samples, all instrument detection limits (IDL's) and calculated method detection limits (MDL's) for all analyses, all QA/QC data presented in summary form and all data reduction procedures.

Bench records, tabulated order of calibration standards, verification and control standards, samples, blanks, matrix spikes, etc. with resulting peak height, concentration or absorbance readouts will be provided with copies of worksheets used to calculate results. A photocopy of instrument readouts, i.e. stripcharts, printer tapes, etc., must be included with all results.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QA Audit results. EPA QC reference samples, or any other reference sample or initial calibration verification, will be identified as to source, lot number, and sample number. Corresponding "true" or target values and associated 95% confidence limits for analysis results will be provided for all reference samples used.

A narrative summary of all procedures actually used for sample preparation, cleanup and analysis, including:

1- Specific identification of all instruments used;
2- Discussion of all factors affecting the analysis and all corrective actions taken;
3- Justification for dilution(s) of all samples or extracts and/or digestates;

4- A summary of the source and reasons for variance from this request (e.g., method changes) including phone log communications;
5- Report any inconsistencies and/or problems with paperwork, shipping and packaging of the samples.

10. Other (use additional sheets or attach supplementary information, as needed):

Report any problems with paperwork, shipping and packaging of samples immediately to SMO. SMO will report to the RSCC.

Submit copy of SAS Client Request Form and of any Record of Communication generated during the analysis of these samples, between the lab, SMO and/or the TPO. This is considered a deliverable item. If not included in the data package(s), the data package(s) will be considered incomplete and SMO will be notified. The lab(s) should forward the regional data packages to

Data Reviewer
USEPA Houston Branch
10625 Fallstone Rd.
Houston, TX. 77099

11. Name of sampling/shipping contact:

Vera Henry (214) 742-6601 TAT
6Rec, Fifc (214) 655-2275

12. Data requirements:

Parameter	Detection limit	Precision desired
See protocols. React, Corr - as per methods or give specifics		

13. QC requirements

Audits required	Frequency of audits	Limits (% or content)
Duplicates		
Corrosivity, ignitability and reactivity	5% (1 per 20 per phase)	none specified
VOA, ABN and Metals	See protocols.	

14. Action requited if limits are exceeded:

Contact Blake Henke at SMO immediately. SMO will contact the DPO and request instructions.

Please return this request to the Sample Management Office as soon as possible to expedite processing of your request for special analytical services. Should you have any questions or need any assistance, please contact your Regional Representative at the Sample Management Office.

Case # _____

SAS Number

U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
209 Madison Str. Alexandria, Va. 22134
Phone: 703/557-2490
To: Diane Cutler

SPECIAL ANALYTICAL SERVICES
Client Request

A. EPA Region/Client: Region VI

B. RSCC Representative: Myra I. Perez

C. Telephone # : (713) 983-2130

D. Date of Request: April 5, 1991

E. Site Name: Odessa Drum Company, Odessa Texas

Please provide below description of your request for Special Analytical Services under the Contract Laboratory Program. In order to most efficiently obtain laboratory capability for your request, please address the following considerations, if applicable. Incomplete or erroneous information may result in a delay in the processing of your request. Please continue response on additional sheets, or attach supplementary information as needed.

1. General description of analytical service requested:

Analysis of drum samples for TCL VOA and ABN fractions, TAL metals, corrosivity, ignitability and reactivity.

2. Definition and number of work units involved (specify whether whole samples or fractions; whether organics or inorganics; whether aqueous or soil and sediments, and whether low, medium or high concentration).

H2O/Sed/Oil/mult phase or single phase

Thirty samples from drums. Samples may be single phase aqueous or organic or two phase aqueous and organic. ~~Aqueous samples will be low or medium~~ concentration in organics and metals. Organic phase samples will be high concentration in organics but low concentration in metals. will be analyzed for parameters mentioned above. Follow instructions in No 7

3. Purpose of analysis (specify whether Superfund (enforcement or remedial action), RCRA, NPDES, etc.):

Superfund enforcement.

4. Estimated date(s) of collection:

Week of April 29, 1991.

5. Estimated date(s) and method of shipment:

Date of collection via overnight air express.

6. Number of days analysis and data required after laboratory receipt of samples:

Thirty-five (35) days after receipt of the final sample by the laboratory.

7. Analytical protocol required (attach copy if other than a protocol currently used in this program):

Aqueous samples are to be analyzed using current low/medium concentration RAS water (VOA and ABN fractions and metals) protocols. Organic phase samples are to be analyzed for organics (VOA and ABN fractions) using high concentration protocols. Organic phase samples for metals are to be analyzed using low concentration RAS soil protocols, using additional nitric acid and hydrogen peroxide to digest the sample, if necessary. If the sample contains both aqueous and organic phases, only the organic phase is to be analyzed by the laboratory.

White Simple or above

Corrosivity - Analyze as described in Chapter 7 of SW-846 using Method 9040 for aqueous samples and Method 1110A for non-aqueous samples.

Ignitability - Analyze as described in Chapter 7 of SW-846 using either Method 1010 or Method 1020.

Reactivity - Analyze as described in Chapter 7 of SW-846 using Method 9010A to analyze for cyanide and Method 9030A to analyze for sulfide.

8. Special technical instructions (if outside protocol requirements, specify compound names, CAS numbers, detection limits, etc.):

None.

9. Analytical results required (if known, specify format for data sheets, QA/QC reports, Chain-of Custody documentation, etc.). If not completed, format of results will be left to program discretion.

Analytical results must be reported in the format indicated in the Protocols.

9. Continued
SAS data packages must include submission of all deliverables, all methods used for prep/digestion through analysis, all calibrations, all raw data (analysis and re-analysis, undiluted and diluted sample data) and reduced data for all analysis of the field and lab QC samples, all instrument detection limits (IDL's) and calculated method detection limits (MDL's) for all analyses, all QA/QC data presented in summary form and all data reduction procedures.

Bench records, tabulated order of calibration standards, verification and control standards, samples, blanks, matrix spikes, etc. with resulting peak height, concentration or absorbance readouts will be provided with copies of worksheets used to calculate results. A photocopy of instrument readouts, i.e. stripcharts, printer tapes, etc., must be included with all results.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QA Audit results. EPA QC reference samples, or any other reference sample or initial calibration verification, will be identified as to source, lot number, and sample number. Corresponding "true" or target values and associated 95% confidence limits for analysis results will be provided for all reference samples used.

A narrative summary of all procedures actually used for sample preparation, cleanup and analysis, including:

1- Specific identification of all instruments used;
2- Discussion of all factors affecting the analysis and all corrective actions taken;
3- Justification for dilution(s) of all samples or extracts and/or digestates;
4- A summary of the source and reasons for varience from this request (e.g., method changes) including phone log communications;
5- Report any inconsistencies and/or problems with paperwork, shipping and packaging of the samples.

10. Other (use additional sheets or attach supplementary information, as needed):

Report any problems with paperwork, shipping and packaging of saples immediately to SMO. SMO will report to the RSCC.

Submit copy of SAS Client Request Form and of any Record of Communication generated during the analysis of these samples, between the lab, SMO and/or the TPO. This is considered a deliverable item. If not included in the data package(s), the data package(s) will be considered incomplete and SMO

10. Continued
will be notiied. The lab(s) should forward the regional data packages to

Data Reviewer
USEPA Houston Branch
10625 Fallstone Rd.
Houston, Tx. 77099

11. Name of sampling/shipping contact:

Vera Henry (214) 742-6601 TAT

12. Data requirements:

Parameter	Detection limit	Precision desired

See protocols.

13. QC requirements

Audits required	Frequency of audits	Limits (% or content)

See protocols. Must need to specify QC for Hg, Com, etc.

14. Action requited if limits are exceeded:

Contact Blake Henke at SMO immediately. SMO will contact the DPO and request instructions.

Please return this request to the Sample Management Office as soon as possible to expedite processing of your request for special analytical services. Should you have any questions or need any assistance, please contact your Regional Representative at the Sample Management Office.

Circle the appropriate contra[redacted]
FIT, REM, (TAT), TES, ARCS, Oth[redacted] _____ [redacted]E/SAS _____

REGION 6
CLP SAMPLE REQUEST FORM

This Form must be completed whenever CLP analytical services are requested. The RSCC will not process any requests for CLP lab space unless this Form is signed and dated by an EPA Project Officer, RPM or OSC.

SITE NAME: Odessa Drum Company LOCATION: Odessa, Ector County, TX EPA ID TXD008122454

TYPE OF INVESTIGATION: ( ) SSI ( ) LSI ( ) HRSS ( ) RI/FS ( ) RA (X) OTHER Site Assessment

SAMPLING ORGANIZATION: Ecology & Environment CONTACT: Vera R. Henry TEL: 214-742-6601

SUBCONTRACTOR: _____ CONTACT: _____ TEL: _____

SHIPPING CONTACT/SAMP. TEAM LEADER: Vera R. Henry ON SITE TEL: 915-367-3045

SAMPLING DATE: Week of 4/29/91 SHIPPING DATE: Week of 4/29/91 SPILL ID # _____

SIGNED BY
EPA PO/RPM/OSC: _____ MAIL CODE: _____ DATE: _____ TEL: _____

NOTIFICATION STATUS: Initial TURNAROUND TIME: 35 days
(Initial or revised)

RAS ANALYSES REQUESTED (Submit to RSCC on Wednesdays by 11:00 AM of week prior to sampling)

	LOW WATERS	MED WATERS	LOW SOILS	MED SOILS	DRINKING H2O SAMP.	OTHER (Describe)
TCL ORG.						
VOA						
BNA						
PEST/PCB						
2,3,7,8 TCDD						
TCL METALS						
TCL METALS & CN						

HIGH CONC./OILY SAMPLES (For RAS analyses & RAS trnd time submit to RSCC one (1) week prior to sampling date, otherwise follow SAS instructions)

NO. OF SAMPLES	MATRIX	CONC.	SOURCE	ANALYSES

SAS ANALYSES REQUESTED (Submit this Form in addition to the Special Analytical Request Form to the RSCC four (4) weeks prior to the sampling date)

NO. OF SAMPLES	MATRIX	CONC.	SOURCE	ANALYSES
30	liquid		drums	TCL VOA and ABN fraction
30	Liquid		drums	TAL metals
30	Liquid		drums	Corrosivity, Ignitability and Reactivity
				(See Attached SAS Request)

Comments: (1)

Attachment L

CLP Data Packages for Drum Samples

UNDER SEPARATE COVER

Attachment M

Data Packages for Groundwater Samples

UNDER SEPARATE COVER

Attachment N

Drilling Subcontractor Logbook

Oil Field Rental/Dotco

Quality Rental and Fishing Services

6-11-91

0-2.0 5/11/9/6
2.0-4.0 6/9/5/5
4.0-6.0 4/5/4/3
6.0-8.0 2/2/3/4
8.0-10.0 14/33/60/51
10.0-12.0 10/57/50/40
12.0-13.5 16/72/100-5"
13.5-21.5 Cored - 3.6 Recovery (10')
21.5-29.5 Cored 8' - 6' Recovery
29.5-39.5 Cored 10' - 5' 2 Recovery

7:00-7:30 Safety Meeting
7:30-9:00 Storing Materials + Setting up Rig
9:00-11:30 Splitspoon Sampling Continues
11:30-12:30 Cored 13.5-21.5'
1:30-2:45 Reamed hole 7 7/8 + Set 6" PVC Surface
2:45-4:20 Cored 21.5'-29.5'
4:20-4:40 Reamed Corehole 4 3/4"
4:40-6:00 Cored 29.5-39.5

CORPORATE HEADQUARTERS
950 McCarty Drive/Houston, Texas 77029/(713) 672-1601
P.O. Box 1331/Houston, Texas 77251
An ENTERRA Company

Oil Field Rental/Dotco

Quality Rental and Fishing Services

6-12-91

7:00-7:30	water level reading - preparing to drill
7:30-8:15	39.5'-44.5' Cored - No Recovery
8:15-8:45	Reamed Core hole 29.5-44.5' to 4 3/4"
8:45-11:00	44.5'-49.5' - 3.2 Recovery 49.5'-54.5' - 4.3 Recovery 54.5'-59.5' - 4.9 Recovery
11:00-12:00	Core barrel hung in hole
12:00-1:00	Lunch (Got barrel out of hole)
1:00-1:40	Dismantled barrel - inspected it before Continuing
1:40-3:30	finished Coring - Plug drilled with 4 3/4" Bit to 100.0'
3:30-8:00	finished with Rig 18 for the day and started on Rig #2

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6-13-91

7:00-9:00 Delay Time - Discussion over the diameter of Borehole.

9:00 - 10:20 Reamed hole from 19.0-100.0 with 5 7/8" Button bit

10:20 - 12:00 Drilled 100-125

12:00-1:00 Lunch

1:00 - 2:45 Installation of well up to Bentonite Pellets. finished Drilling with Rig 18 for the day - Started up Rig # 2 - Drilled from 27 - 124.0' and installed well up to Bentonite Pellets

2:45 - 8:00

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6-15-91

Final Decon on Rig #2

Started Development with Rig #18

Started Topping of W-1 - W-2 with Cement, built Cement pads and put in Corner Posts

Cemented W-3 and built Pad + Put in Corner Posts.

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An ENTERRA Company

Oil Field Rental/Dotco

Quality Rental and Fishing Services

6-16-91

Purged wells + helped take water samples.
Prepared equipment for DRive home

CORPORATE HEADQUARTERS
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P.O. Box 1331/Houston, Texas 77251
An ENTERRA Company

7-11-91 ODESSA
7:00-6:00 - STandby
1hr for Lunch
Drill (7-12-91)
7:00-3:30 - Help Don
3:30-4:00 - Rig up SS.
4:00-6:30 - ~~Drill Set surface~~
6:30-8:00 - Drill - set surface
Drill to 20' - 5 7/8 7 1/2
7-13-91 - CHange air Filter A-C-
7:00-3:00 - Help Don
10 gls Hydraulic Oil -
3:00-7:00 - Drill Rig 2nd
7:00-7:00 - Install
Supplies 100 total
100' - casing 1-coat -
20 - screen sand 99
Cone + slip Bent 45.5
5 - Sks cement
2 - gL pells

0-4.5 - SL sandy SILT
L/Tan
4.5-7.0 - weathered
~~L-STone~~ S/STone
7.0 - 30.0 - 21 Harder
S/STone Harder @ 23
30.0-47.0 - meD Tan
cemented sand - w/s
S/STone
47.0 - 63.0 L-Tan
meD cemented sand w/s
S/S + S/Gravel
63.0-64.0 - Reddish Tan
same as above (Harder)
W/L @ 63.0
64.0-76.0 - L/Tan cem-sand
w/s S/S
76.0-89.0 - Reddish or Brn
cem-sand - w/s s/s
79.0-84.0 - Harder
Over

87-99 - L-Tan cem-sand
w/ss/s course
99-106 - -Same Brn
106-124 - same L-Tan
moist @ 108 to 112
Back Filled to 121

7-14-91
7:00-12:00 Grout & cleanup
26 sks Grout - 1 bg Bent Pow.
12:00-1:00 - Lunch
1:00-1:30 - Decon
1:30-5:30 - set surface - Drill
0-9' surface 9 7/8
9-105 - 5 7/8
5:30-6:00 - Stand by Rain
6:00-7:00 - Install ... -99
20' - Screen - Bent Pells - 92.5
110 - casing
1-EA-Slip-Cone
5-Sand - 2.0 gl Pells

0-4 - Brn silty sand
4.0-4.5 Brn weathered sand
stone - cemented
4.5-18.5 - Brn cemented
sand w/s sand S/
18.5-20 Tan Hard S/S
20-48 - Tan cem-sand
w/s S/S Harder 34-40
48-52.5 - D/Brn cem-sand
52.5-68 - Tan cem-sand
S/Gravel @ 60'
Brn fr -68-71.5
Brn fr 81-90.0
moist 109
124 T.D.

Attachment O

Copies of Logbooks

ecology and environment, inc.

International Specialists in the Environment

Job Number ZT1061/GTX112054

Site ~~Assessment~~ visit 5/6/91 Investigation

Odessa Drum Recyclers

Odessa, Ector County, Texas

E & E Job Number ET1061

Telephone Code Number _____

Site Name Odessa Drum
Ector County

City/State ~~Odessa~~ VKV 5/6/91 Odessa, TX

TDD T06-9103-26

PAN ETX1120SA

SSID _____

Start/Finish Date 5/6/91 | 6/16/91

Book 1 of 3

E & E Emergency Response Center: (716) 684-8940
E & E Corporate Center: (716) 684-8060
MEDTOX Hotline: (501) 370-8263
E & E Safety Director (Home): (716) 655-1260

TDD #T06-9103-26 5/6/91

1300 TATs Henry + Haghanty onsite, TATs unloading equipment and preparing for sampling manuer.
1502 TAT Dry on site
1538 TAT Henry spoke with OSC Fyfe about drums that might not have enough liquid to sample. He said in cases where there isn't enough liquid, then choose another drum from another group.
1701 TAT's enter hot zone (see logs for times)
1858 TATs out of hot zone
1900 TATs loading vehicle
1905 TATs in office preparing to leave
1930 TATs off site.

TDD #T06-9103-26 5/7/91 cdt 5/7/91

0700 TATs Vera Henry (PM), Gary Dry (SSO) + Carol Geraghty (TM) arrive on site. Weather: highs expected near 80 with 50% chance of rain, currently cool with light breeze. Vera Henry attending ERCS SS meeting. TATs Dry + Geraghty preparing for TAT safety meeting, preparing for level B entries and conducting other administrative duties. Proposed work: TAT will determine which additional drums will need to be flagged for sampling. Once all drums are marked, TAT will make level B entry to open drums, air monitor, determine volume + description of contents. Depending on air monitoring results, actual samples may be collected (3 per drum of differing volumes) in level C. Samples for each of 3 different CLP labs will be collected + shipped for 1 lab at a time to avoid exceeding the

Carol a Geraghty

Odessa Drum Recyclers TUE

TDD# TA - 9103-16 5-7-91

holding times. For details of the sampling activities refer to sampling log D410. —CAS

0730 TATs conducted Site Safety meeting (see sheet attached to health + Safety plan). —CAS

0906 TATs entered hot zone to mark new drums.

1006 TATs out of hot zone.

1008 TATs marked more drums and will re compile a list of company names, drums and contents.

1120 TATs enter hot zone.

1205 TATs out of hot zone

1230 TATs enter hot zone

1305 TATs out of hot zone —URS

1337 TATs depart site for lunch

1405 TATs return to site. TATs reviewing drum list to make final selection of 30 drums for sampling —CAS

1459 TATs preparing jars and sampling paperwork and preparing site sketch.

1705 TATs placing sampling jars on top of drums before sampling —URS

TDD# TA - 9103-16 5/7/91

1735 TATs enter hot zone to collect samples.

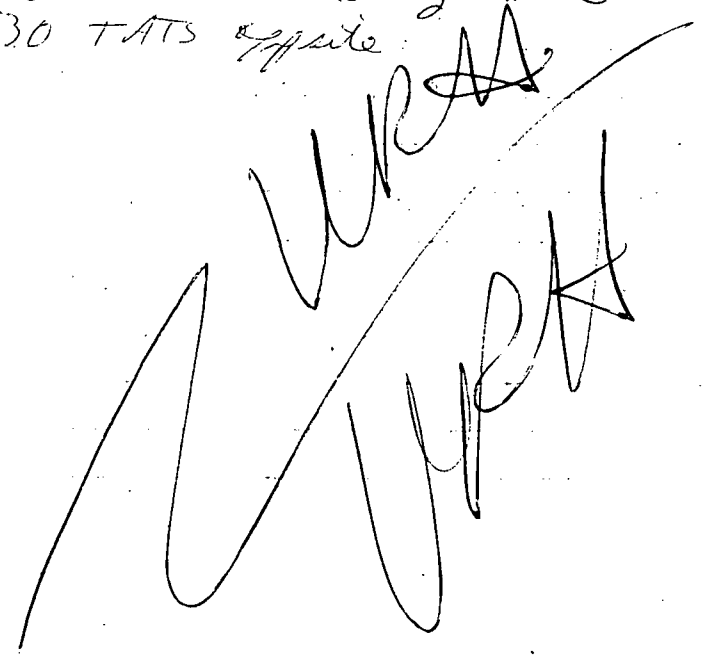
1840 TATs out of hot zone

1845 TATs decon samples and securing drums for the night

1855 TATs decanning equipment

1900 TATs loading truck

1930 TATs off site



T06-9103-26 5/8/91

0700 TATs Vera Henry (PM), Gary Dry (SSO) & Carol Geraghty (TM) arrive on site, TAT Henry is attending ERLS workplan & safety meeting. TATs Geraghty & Dry preparing for level C Entry to collect drum samples (Air monitoring of opened drums yesterday showed 0ppm above background on HNU on all drums to be sampled but 1 - it was 4ppm - downgraded from B to C). Weather - cool with chance of rain. High expected near 81° Proposed Work - TAT will complete collecting duplicate samples (8ea) from the remaining drums in the back field (14 drums) then CLP paperwork will be completed for the two labs to receive RCRA characteristic samples (30) and Inorganics (30). The Samples will be shipped by FedEx today.

0730 TATs conduct a site

Carol A Geraghty

T06-9103-26 5/8/91

Safety meeting - see SSP for meeting notes.

0802 TATs will also collect samples for organic compound analyses.

0805 TATs enter hot zone to place jars on drum before sampling begins.

1011 TATs out of hot zone.

1230 TATs off site for lunch

1300 TATs pick up ice for samples

1330 TATs on site. TATs continue CLP paperwork, sample tagging & packaging for RCRA characteristics and for Inorganics cor

1745 TATs Geraghty, Henry - Dry depart site with 10 coolers to be shipped to 2 labs (5 coolers each) in route to the Federal Express office in Midland.

1830 TATs arrive at Fed Ex office and complete package packaging and shipment. For complete details of sample Shipment info see sample log D410

Carol A Geraghty

TO6-9103-26 Wed 5/8/91

1915 TATS Depart Fed Ex office in Ryder Van in route to Site (gasoline was purchased)

1940 TATS arrived at the site and secured all equipment and supplies for the night.

2000 TATS depart site for the day

Carol A Geraghty

TO6-9103-26 Thurs 5/9/91

0700 TATS Vera Henry (PM), Gary Dry (SSO) & Carol Geraghty (TM) arrived onsite. TAT Henry attending ERCS safety & workplan meeting. TATS Dry & Geraghty preparing for TAT Safety meeting and preparing for the days work activities. Weather Clear and cool (low 70's - high 60's) with highs near 80. Light breeze

Proposed Work - TAT will Complete the CLP paperwork for the 30 drum Samples (3 sample jars per drum) collected for Organic analyses, tag & package and ship the samples by federal express overnight delivery. Time allowed, TATS will enter hot zone to collect drum label information. Sample paperwork will be done in level D.

0730 TATS conduct SSM - see sheet attached to SSP for details.

0739 TATS begin work on completing CLP paperwork for samples to

Carol A Geraghty

T06-9103-26 Thurs 5/9/91

be sent for organic analysis. cas
1215 TAT completes labeling and tagging samples.
1219 TAT off site for lunch
1240 TAT purchases ice and Vermiculite for samples.
1300 TAT packages samples for Fed Ex Delivery
1430 TAT completed packaging of samples.
1446 TAT Henry called Blake Hance to give him air bill numbers for RCRA, inorganic and organic samples.
1448 TATS off site to transport samples to the Fed Ex office (Organic analyses)
1510 TATS arrived at Fed Ex office and shipped 5 coolers, and 2 letters to SMO + Regional CLP office (of traffic repots + SAS packing slips) Coolers were sent to Environmental Industrial Research. See log D410 for more details.
Carol a Douglas

T06-9103-26 Thurs 5/9/91

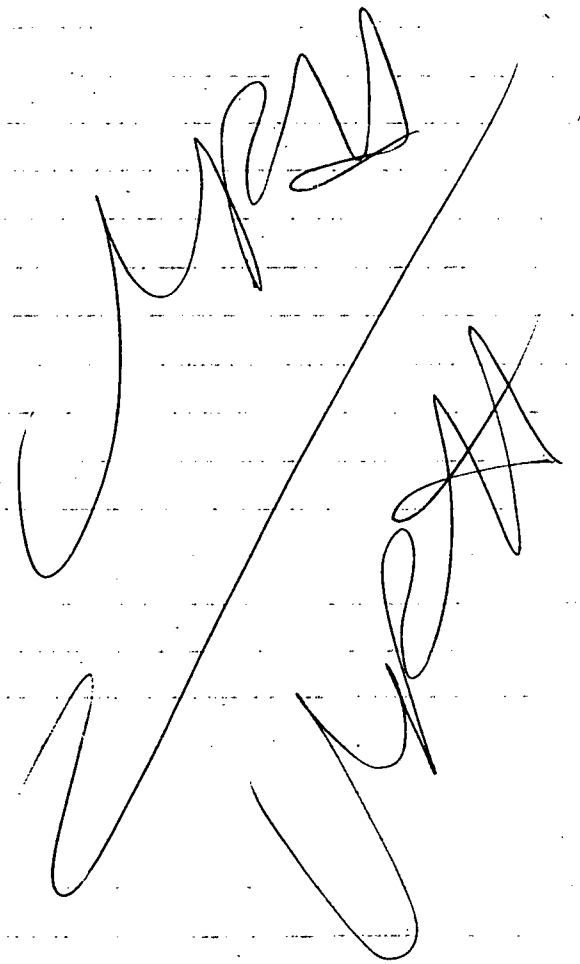
1520 TATS depart Fed Ex office en route to site ——— cas
1600 TATs return to site and prepare to enter hot zone to collect drum label information cas
1620 TATs enter hot to get information off of drums.
1700 TATS return from hot zone see log D410 for details of drum inventory information.
1710 TATS prepare the truck to be returned to Dallas. Some supplies will be left for future use.
1800 TATs Dry and Heghaty offsite

T06-9103-26 5/10/91

1000 TAT called the following companies to have the check for underground utility lines.
ENERGAS 333-5492
TU ELECTRIC 337-1000
Southwestern Bell 1-954-4102
Conoco 385-0270, Mrs. Little John
1030 ENERGAS on site. Fibrey said to call them when drilling begins and they will mark areas.
1045 TU Electric on site. ENERGAS off site. TU Electric said there were no underground lines.
1050 Conoco on site. They said there were no underground lines on this property.
1055 TU Electric off site
1103 Conoco off site.
1340 Southwestern Bell on site. He checked for underground cables, Several cables were found. Only one up front is currently being used, He marked the one in use. He pointed out other cables and said

T06-9103-26 5/10/91

that they were not marked up and if they were hit during a drill, it would be O.K.
1433 Southwestern Bell off site



TO6-9103-26 6/14/91

1400 TAT starting ~~to~~ prepare paperwork and bottles for sampling mission.
~~1445 Leave~~ UPA 6/14/91
1830 TAT completed preparing bottles and TABS.

TO6-9103-26 6/15/91

0800 TAT preparing Chain of Custody Forms (as much that can be done before Sampling).
UPA

1000 Chain of Custody Partially complete.

TDD# R06-9103-26 6/16/91 6/16/91

SAMPLE DATA LOG

SAMPLERS: Vera R. Henry / David Ehresmann

SMPL #	TIME	MTRX	C/G	QC	PRSV	COC #	LOCATION/COMMENTS

TDD#06-9103-26

6/16/91

18

SAMPLERS: Vera L Henry / David Ehressman

SAMPLE DATA LOG

SMPL #	TIME	MTRX	C/G	QC	PRSV	COC #	LOCATION/COMMENTS
W1	1000	Water	G		4°C	6-00417 VRH 6/16 6-00418	Well 1 / Volatiles Lot# B8005094
~~W1~~	~~1000~~	~~Water~~	~~G~~		~~4°C~~	6-00417 6-00419	Well 1 / Semi-volatiles Lot# A9037054
W1	1000	"	"		HNO_3 pH<2	" "	" / Metals Lot# C8028014
W1	1000	"	"		NaOH pH>12	" "	" / Cyanide Lot# " "
W1	1000	"	"		H_2SO_4 pH<2	" "	" / Phenols Lot# A9037054
W2	1104	"	"		4°C	6-00412 6-00413	Well2 / Volatiles Lot# B8005094
W2	1104	"	"		4°C HNO_3	"	Well2 / ~~Semi-Vol~~ Metals VRH 6/19/91 Lot# C8028014
W2	1104	"	"		4°C	"	" / Semi-volatiles Lot# A9037054
W2	1104	"	"		NaOH	"	" / Cyanide Lot# C9193010
W2	1104	"	"		H_2SO_4	"	" / Phenols Lot# A9037054
W3	1155	"	"		4°C	6-00408 & 6/16/91 VRH 6-00409	Well 3 / Volatiles Lot# A9037054
W3	1155	"	"		4°C	"	" / Semi volatiles Lot# A9037054
W3	1155	"	"		H_2SO_4	"	" / Phenols Lot# "
W3	1155	"	"		HNO_3	"	" / Metals Lot# C8026094
W3	1155	"	"		NaOH	"	" / Cyanide Lot# " "

19

TDD#06-9103-26

6/16/91

SAMPLE DATA LOG

SAMPLERS: Vera R Henry / David Cheesman

SMPL #	TIME	MATRIX	C/G	QC	PRSV	COC #	LAB/COMMENTS
W4	1039	water	~~G~~		4°C	6-00416 6-00418	Well 4/ Volatiles Lot# B8005094
~~W4~~	~~1039~~	~~"~~	~~G~~	-	~~4°~~	6-00416 6-00418	" / ~~Semivolatiles~~ Lot# A8173024
W4	1039	"	"		H_2SO_4	" "	"/ Phenols Lot# " "
W4	1039	"	G		HNO_3	"	"/ Metals
W4	1039	"	G		NaOH	"	"/ Cyanide
W5, MS	1107	"	G		4°C	6-00410 6-00418	MS/ volatiles/ Well 2 Lot# B8005094
W5, MS	1107	"	G	X	4°C	"	MS/ semivolatiles/ Well 2 Lot# A8173024
W5, MS	1107	"	"	X	H_2SO_4	"	MS/ Phenols/ Well 2 Lot# " "
W5, MS	1107	"	"	X	NaOH	"	MS/ Cyanide/ Well 2 Lot# C9193010
W5, MS	1107	"	"	X	HNO_3	"	MS/ Metals/ Well 2 Lot# C8026094
W6, MSD	1105	"	"	X	4°C	6-00414 6-00415	MSD/ Volatiles/ Well 2 Lot# B8005094
W6, MSD	1105	"	"	X	4°C	"	MSD/ Semivol/ Well 2 Lot# A8173024
W6, MSD	1105	"	"	X	H_2SO_4	"	MSD/ Phenols/ Well 2 Lot# " "
W6, MSD	1105	"	"	X	HNO_3	"	MSD/ Metals/ Well 2 Lot# C8026094
W6, MSD	1105	"	"	X	NaOH	"	MSD/ Cyanide/ Well 2 Lot# " "

VRH 6/16/91

TDD# T06-9103-26 6/16/91

0805 TAT completing paperwork for sampling

TAG #s for Well 1 samples were 6-097506 and 6-097508 thru 6-097513

TAG #s for Well 4 samples were 6-097523 thru 6-097529

TAG #s for Well 6 samples are 6-090399 thru 6-090402 and 6-097515, 6-097514, 6-090398

TAG #'s for Well 2 samples are 6-097536 thru 6-097541 and 6-097543. VRH 6/16/91

TAG #s for Well 5 samples were 6-097516 thru 6-097522

TAG #s for Well #3 samples were 6-097530 and VRH 6/16/91 6-097542 and 6-097531 thru 6-097535

TDD# 06-9103-26 6/16/91

PHOTOGRAPH LOG

CAMERA/LENS(MODEL) Nikon N 4004 / 52mm skylight 1A
SERIAL # EPA # 724903

TIME	SQ/FR#	ROLL#	DIR	SUBJECT	P/W
Monday 5-4-91 1550	1	1	C.P.	Roll #1 and date confirmation	
1125	2	1	E	Drums labeled with flags VH/CG	
1126	3	1	E	Drum labeled w/ flags VH/CG	
1127	4	1	E	TATs preparing to open drums VH/CG	
1130	5	1	E	TATs Air monitoring open drums VH/CG	
1135	6	1	W	TAT sampling drum for disposal VH/CG	
1140	7	1	W	TAT sampling drum for disposal VH/CG	
1142	8	1	W	TAT sampling drum VH/CG	
1150	9	1	N	Drum labeled w/ survey flags VH/CG	
Friday 5/10/91 1420	10-12	1	N	Southwestern Bell Marking Cable Lines VH/CG	

PHOTOGRAPH LOG

CAMERA/LENS(MODEL) Nikon N 4004/52mm Skylight 1-A

SERIAL # EPA # 224983

TIME	SQ/FR#	ROLL#	DIR	SUBJECT	P/W

D410

ecology and environment, inc.

International Specialists in the Environment

Job Number ET1061 / ET+11205A

SITE INVESTIGATION
ODESSA DRUM RECYCLERS
ODESSA, ECTOR COUNTY, TEXAS

E & E Job Number ET 1061

Telephone Code Number

Site Name Odessa Drum
Ector County

City/State Odessa, Texas

TDD T06-9103-26

PAN ETX 11.20SA

SSID

Start / Finish Date 5/6/91 / 6/15/91

Book 2 of 3

E & E Emergency Response Center: (716) 684-8940
E & E Corporate Center: (716) 684-8060
MEDTOX Hotline: (501) 370-8263
E & E Safety Director (Home): (716) 655-1260

TDD # T06-9103-26 Monday 5-6-91

1701 TATs enter hot zone to air monitor. HNu Background = 0ppm. All air monitoring readings were 0ppm. TATS Henry (PM), Geraghty, Dry. TATS marked drums to be sampled tomorrow using white survey flags. Drums marked so far include: 4647, 4756, 4859, 4891, 4705, 4882, 4622, 4783, 4340, 4199, 4603, 4518, 4107, 4507, 4532, 4593, 4354, 4837, 4777, 4448, 4499, 4163, 4133, 4138, 4139, 4453, 4159 + 4898. CAG

1900 TATs depart hot zone, conduct dry decon and are preparing the site for the night. TATS summarizing drum labeling information + planning for tomorrow. CAG For further details of proposed work activities and other site investigation related information refer to Logbook 1 "Site Investigation / ETX1120SAA".

Carol A Geraghty

TDD # T06-9103-26 TUE 5-7-91

0700 TATs arrive on site and prepare for level B entry. Any additional drums to be marked will be done in level C. Level B will be used to open drums, air monitor, and obtain information on volumes & descriptions of drum contents. If air monitoring indicates breathing zone levels of organic vapors to be less than 5ppm, actual sampling activities will be conducted in level C. All samples for each of the three labs will be collected 1 lab at a time to avoid exceeding the holding times. Vera Henry is discussing the additional unknown drums with the ERCS chemist. cas

0906 TATS Vera Henry, Carol Geraghty & Gary Dry entered the hot zone and flagged the following additional drums: 4534, 4038, 4082, 4117, 4248, 4393, 4408, 4512, 4620, 4622, 4684, 4252 TRC, 4375 Dynocken & 4431 Undype. cas

1005 TATS out of hot zone and are compiling a list of the drums that will be opened, air monitored, volumes checked & description of contents

1053 TATS completed preparing the list of 41 drums to be checked. TATS dressing out in level B PPE to conduct opening / sample checking operations cas

1120 TATs enter the hot zone to open / air monitor drums cas

1205 TATs out of hot zone to exchange air tanks and to drink fluids. 21 drums located in the east property were opened and checked. NO HNu readings above background (0) were observed for any of those drums. Two drums in Back property were opened

Carol A Geraghty

Odessa Drum Recycler

T06-9103-26 5-7-91 The 4393 drums had HNU of 3-4 ppm above background. The other drum, 4357 had HNU of 0 above background.

1230 TATS reenter the hot zone to complete level B entry

1305 TATS exit hot zone - all of the 41 drums except 4777 & 4448 were checked - No drums had an reading above 5ppm w/ HNU above zero background) - All had 0 above background except 1

1449 TAT enters hot zone to prepare site sketch of drum locations. Drum 4777 (East-field) had been missed before because the flap had fallen.

Summary of Data from 41 Screened drums -

Company	# needed	Drum #	HNU above BKG	Volume	description	Selected
Unidyne	1	4408	0	1/4	oil above aqueous liq	yes
		4431	0	1/2	greasy	yes
Trebol	2	4647	0	3/4	brown liquid	yes
		4082	0	2/3	aq lt. brown liq	yes
Texas Nuclear	1	4756	0	Not enough		no
Specialty Chem	1	4859	0	F	lt. brown Aq liq	yes
Rebbco	1	4891	0	4"	dk brown oily	yes
Petrolite	1	4705	0	2/3	clear liq w/ green bot aq	yes
Petrochem	1					
Omega	2	4882	0	1/3	(B) liq w/ cloudy top brown-bottom	yes
		4622	0	F	(S) liq w/ dark brown paste	yes
		4620	0	1/2	(T) cloudy white liq w/ dispersed particles	yes
		4248	0	1/2	aq lt brown	yes
hydrochem	1	4117	B*	3"	yellow - dark paint	no
Exxon	2	4783	0	2/3	murky brown liq aq	yes
		4340	0	3	orange aq liq	yes

Carol A Fitzgerald

Odessa Drum Recycler

TA6-?-3-26 5-7-91 Tue

table continued —

Company	# needed	Drum #	HNU above Bck	Volume	description	Sel
Van W-S	1	4199	0	3/4	clear liq	yes
		4534	0	1"	sludge	no
		4038	0	2"	Dk brown liq Rust H2O	no
Texas [illegible] Corp	1	4252	0	2/3	dk oily liquid	yes
Nitro	1					
S-K-S	1	4603	0	F	(B) rusty water w/ suspended part	yes
		4518	0	F	sludgy liq (bottom part)	yes
NL	1	4107	0	1/2	dk brown liq with susp part	no
Nalco [illegible]	1	4597	0	F	cloudy liq w/ sludge at bot	yes
NALCO	1	4202	0	1/2	dk oily	yes
Dynam-Nobel	1	4532	0	1/2	murky yellow liq	no
		4593	0	1/2	DK oily liq thick	yes
DSK	1	4354	0	F	clear liq w/ rust at bottom	yes
[illegible]	1	4837	0	Liner	dark oily	yes
		4777	0	F	lt brown w/ some part.	NO
Chem [illegible]	1	4499	0	1/4	clear liq w/sludge	yes
Champion	3	4163	0	F	dk oily liq	yes
		4133	0	F	Solid	yes
		4138	0	3/4	dk oily liq	yes
		4139	0	3"	aqueous tan cloudy w/ lt solids	no
		4393	4 ppm	1/2	brown liq	yes
Ez Fisher	3	4453	0	F	single phase dk oily liq	yes
		4159	0	1/2	dk sludgey thick liq	yes
		4898	0	F	clear liq	no
		4512	0	2/3	clear liq / susp. solids	no
		4684	0	1/4	murky brown sed	yes
Dynamon	1	4375	0	1/4	clear liq w/ sed	no

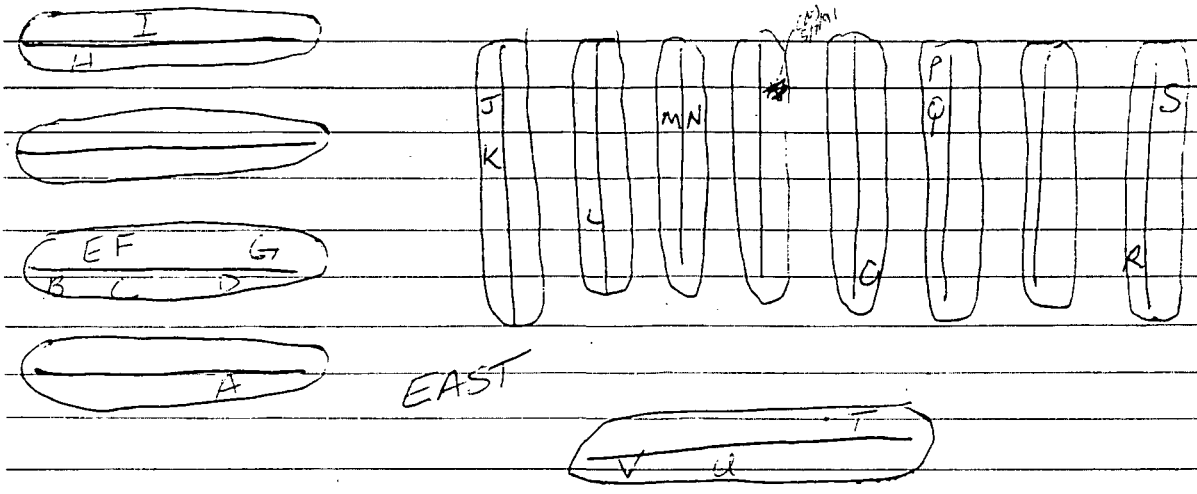
The 30 drums marked "yes" in the Selected column will be sampled 3 times and sent to three different labs for three types of analyses

Carol A. Geraghty

Odessa Drum Recycler

TO6-9103-ZU

5-7-91 Tue



Double rows of drums in east field — Drum numbers as follows

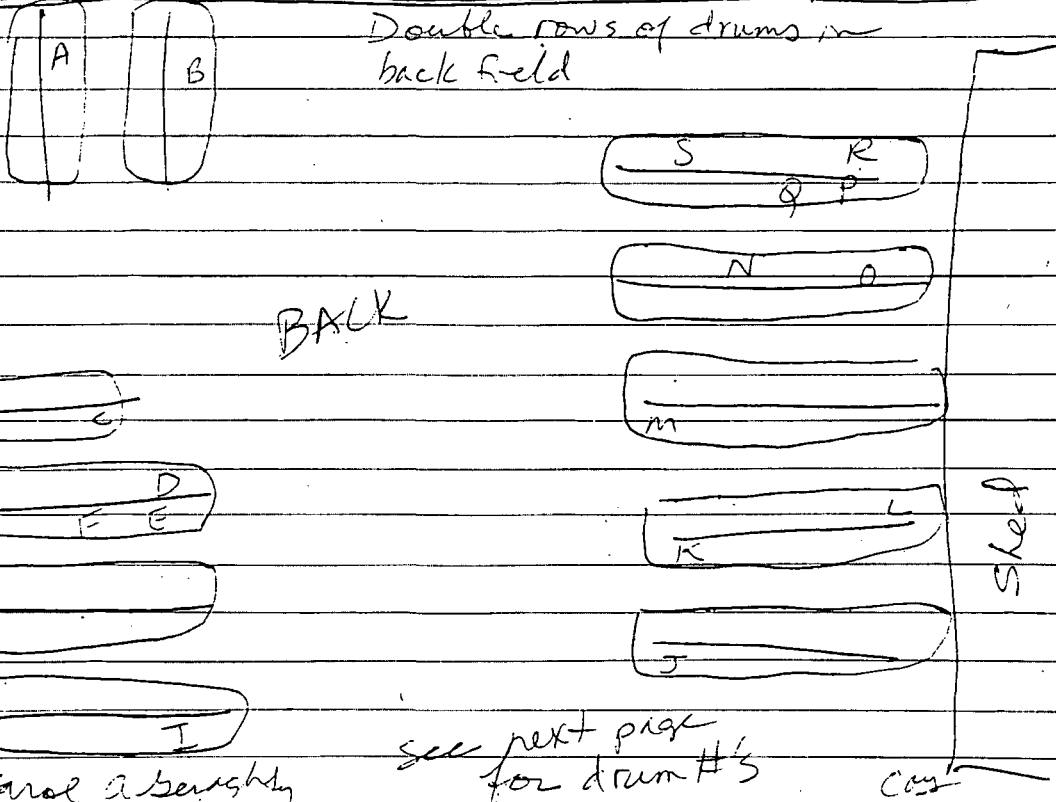
A = 4453 B = 4512 C = 4507 D = 4499 E = 4534

F = 4532 G = 4518 H = 4593 I = 4603 J = 4622

K = 4620 L = 4647 M = 4684 N = 4705 O = 4756

P = 4783 Q = 4777 R = 4837 S = 4859 T = 4882

U = 4898 V = 4891 (circled drums will not be sampled) Cars



TO6-
Dru
A =
E =
T =
m =
Q =
Laird
1609
1705
1721
1735
1845

Odessa Drum Recycler

TDD-9103-7:   5-7-91 Tue

Drum numbers for back field are as follows:

A = 4393 B = 4431 (C = 4139) D = 4138

E = 4133 F = 4159 G = 4163 H = 4199

I = 4354 (J = 4375) K = 4408 L = 4252

M = 4202 N = 4248 O = 4340 (P = 4082)

Q = 4117 (R = 4107) (S = 4038)

(circled drums will not be sampled.)

1609 TATS making preparations to collect 2-8oz jars per drum (30 drums) for RCRA characteristics and metal analyses. ——— CAO

1705 TATS enter hot zone to place jars (2-8oz/drum) on top of each of the 30 selected drums. TATS will begin in East field

1721 TATS return from hot zone and prepare to collect samples from East field ——— CAG

1735 TATS return to hot zone to collect Samples.

1840 TATS return to decon area - all samples in the East field 16 22 (CAG 5-7-91) pr. were collected. All drums (30) in the East and Back field were secured with duct tape to protect from rainwater entry (drums were left open with Coliwasas in tact because additional sample volume will be collected). For samplers, times, etc refer to sample tracking log on pp 10 →. Samples were decon'ed and locked in cooler overnight.

Carol A Geraghty

Odessa Drum Recycler

TO6-9103-26 Wed 5-8/91

0805 TATs Geraghty, Henry + Dry enter hot zone to place sample jars on top of the drums to be sampled. The remaing RCRA + inorganic as well as all of the organic samples will be collected Today. Back field 14 drums @ 2-120ml vials + 3-8oz jars. East field 16 drums 2-120ml vials + 1 8oz jar. CAS

0830 TATs return to decon area + prepare for level C drum sampling activities. (Air monitoring during drum opening confirmed no readings above 5ppm above background on HNU were obtained) CAS

0845 TATs enter hot zone to collect all remaing samples CAS

1011 TATs Complete sampling and return to decon station 2-4oz samples and 3-8oz Samples were collected each for drums - 4393, 4431, 4138, 4133, 4159, 4163, 4199, 4354, 4408, 4252, 4202, 4248, 4340 + 4117 (Back field), 2-4oz samples and 1-8oz Sample was collected from the following drums - 4453, 4507, 4499, 4518, 4593, 4603, 4622, 4620, 4647, 4684, 4705, 4783, 4837, 4859, 4882 and 4891 (East field). Back field samples were collected for RCRA, Inorganic + Organic analyses. East field samples were collected for organic (inorganic + RCRA collected yesterday) See Sample tracking log on pg 10 → for more details. CAS

1015 TATs decontaminating samples and mixing CLP paperwork for RCRA + inorganics.

Carol A Geraghty

Odessa Drum Recycler

TO6-9103-26 Wed 5/8/91

RCRA CHARACTERISTICS SAS #	INOREANIC SAS #	DRUM NUMBER
6264F-01C	6264F-01M	4593

This information will be included on a larger table on pg 10 →

Carol A Jennings

Odessa Drum Recycler

TDD 6-9103-26 — Wed 5-8-91

DRUM NUMBER	SAS* SAMPLE NUMBER	EPA TAG	COC NUMBER	SAMPLERS Carol Geraghty, Gary Dry, Vera Henry DATE	TIME	C/G	P	QA/QC
4593	6264F-01C	6-090411	6-00443	5/7/91	1735	G	NO	No
	6264F-01M	6-090412	6-00437		1735			
4620	6264F-02C	6-090413	6-00443		1737			
	6264F-02M	6-090431	6-00437		1737			
4622	6264F-03C	6-090432	6-00443		1739			
	6264F-03M	6-090433	6-00437		1739			
4882	6264F-04C	6-090434	6-00443		1741			
	6264F-04M	6-090435	6-00437		1741			
4647	6264F-05C	6-090443	6-00443		1743			
	6264F-05M	6-090444	6-00437		1743			
4684	6264F-06C	6-090445	6-00443		1745			
	6264F-06M	6-090446	6-00437		1745			
4891	6264F-07C	6-090447	6-00433		1747			
	6264F-07M	6-090448	6-00436		1747			
4859	6264F-08C	6-090449	6-00433		1749			
	6264F-08M	6-090450	6-00436		1749			
4499	6264F-09C	6-090451	6-00433		1751			
	6264F-09M	6-090452	6-00436		1751			
4507	6264F-10C	6-090453	6-00433		1753			
	6264F-10M	6-090454	6-00436		1753			
4705	6264F-11C	6-090455	6-00433		1755			
	6264F-11M	6-090456	6-00436		1755			
4783	6264F-12C	6-090457	6-00433		1757			
	6264F-12M	6-090458	6-00436		1757			
4837	6264F-13C	6-090459	6-00435		1759			
	6264F-13M	6-090460	6-00445		1759			
4453	6264F-14C	6-090461	6-00435		1803			DUP
	6264F-14M	6-090462	6-00445		1803			DUP
4518	6264F-15C	6-090463	6-00435		1805			NO
	6264F-15M	6-090468	6-00445		1805			

* -##C = RCRA characteristics
##M = Inorganic analysis

Carol A Geraghty

Odessa Drum Recycler

T06-9103-26

Wed 5-8-91

Samplers: Gary Dry, Carol Geraghty, Vera Hennig

Drum Number	SAS sample number	EPA TAG	COC Number	Date	Time	G/C	D	QA/QC
4603	6264F-16C	6-090469	6-00435	5/7/91	1810	G	NO	NO
	6264F-16M	6-090470	6-00445	5/7/91	1810			
4252	6264F-17C	6-090417	6-00435	5/8/91	0850			
	6264F-17M	6-090418	6-00445		0850			
4393	6264F-18C	6-090419	6-00435		0853			
	6264F-18M	6-090420	6-00445		0853			
4199	6264F-19C	6-090421	6-00444		0855			
	6264F-19M	6-090422	6-00442		0855			
4248	6264F-20C	6-090423	6-00444		0857			
	6264F-20M	6-090424	6-00442		0857			
4117	6264F-21C	6-090425	6-00444		0900			
	6264F-21M	6-090426	6-00442		0900			
4431	6264F-22C	6-090436	6-00444		0903			
	6264F-22M	6-090437	6-00442		0903			
4408	6264F-23C	6-090438	6-00444		0905			
	6264F-23M	6-090441	6-00442		0905			
4163	6264F-24C	6-090442	6-00444		0907			
	6264F-24M	6-090414	6-00442		0907			
4340	6264F-25C	6-090415	6-00440		0909			DUP
	6264F-25M	6-090416	6-00441		0909			DUP
4202	6264F-26C	6-090427	6-00440		0911			NO
	6264F-26M	6-090428	6-00441		0911			NO
4159	6264F-28C	6-090429	6-00440		0913			DUP
	6264F-28M	6-090430	6-00441		0913			DUP
4138	6264F-27C	6-090391	6-00440		0915			NO
	6264F-27M	6-090392	6-00441		0915			
4354	6264F-29C	6-090393	6-00440		0917			
	6264F-29M	6-090394	6-00441		0917			
4133	6264F-30C	6-090395	6-00440		0923			DUP
	6264F-30M	6-090396	6-00441		0923			DUP

out of order

Carol A Geraghty

Odessa Drum Recycler

T06-9103-26 Wed 5-8-91

1745 TATs depart site in Ryder truck with 10 coolers to be shipped to two labs (5 per lab) for overnight delivery. Paperwork will be completed at the Fed Ex office

1830 TATs arrive at Fed Ex office and complete the paperwork & ship the coolers to the lab as follows:

For Metal Analyses:

5 coolers each containing 6 - 8oz samples were shipped to the following CLP lab for TAL metals analysis: Case # 16392

Silver Valley (208-784-1258)
One Government Gulch Attn:
Kellogg, Idaho 83837 Sample Custodian

Coolers were shipped on master airbill # 007341580 1 with the following sub numbers:
2 of 5 - 836276290 4, 3 of 5 836276291 3,
4 of 5 - 836276292 2, 5 of 5 836276293 1

Samples were seperated into coolers as follows: 6264F-01M thru 6264F-06M, COC # 6-00437 ; 6264F-07M thru 6264F-12M, COC # 6-00436 ; 6264F-13M thru 6264F-18M, COC # 6-00445 ; 6264F-19M thru 6264F-24M, COC # 6-00442 ; 6264F-25M thru 6264F-30M, COC # 6-00441

Samples were packaged with ice before shipping

Carol A Haughey

Odessa Drum Recycler

T06-9103-206 Wed 5-8-91

For ~~RCRA~~ RCRA Characteristics:

5 coolers each containing 6-8oz samples were shipped to the following CLP lab for RCRA Characteristics analyses for Ignitability, Corrosivity & Reactivity:

ICM Case # 16392
Industrial Corrosion Mgmt
1152 Route 10 (201-584-0330)
Randolph, NJ 07869
attention: Susan Richardson

Coolers were shipped on master airbill # 007341582 with the following sub numbers:
2 of 5 - 836276295 6, 3 of 5 - 836276296 5,
4 of 5 - 836276297 4, 5 of 5 - 836276298 3
Samples were seperated into coolers as follows:
6264F-01C thru 6264F-06C, COC# 6-00443;
6264F-07C thru 6264F-12C, COC# 6-00433;
6264F-13C thru 6264F-18C, COC# 6-00435;
6264F-19C thru 6264F-24C, COC# 6-00444;
6264F-25C thru 6264F-30C, COC# 6-00440
Samples were packaged with ice before shipping.
1915 TATs complete shipping coolers by Federal Express and are in route to site - see site log for additional details

Carol A Geraghty

Odessa Drum Recycles

TO6-9103-26 - Thurs 5-9-91

0739 TATs Vera Henry, Carol Geraghty + Gary Dry begin GLP paperwork, tagging + packaging of the samples to be submitted for organic analysis (30 drums, 3 samples per drum: 1 for extractables and 2 for volatiles)

Samplers: Vera Henry, Carol Geraghty, Gary Dry

Drum Number	RAS Sample Number	EPA TAG	COC Number	Date	Time	%	P	QA/QC
4593	FK001	6-097503	6-00427	5/8/91	0925	G	NO	NO
		6-097501						
		6-097502						
4620	FK002	6-097544			0927			
		6-097505						
		6-097504						
4622	FK003	6-097547			0929			
		6-097546						
		6-097545						
4882	FK004	6-097550			0931			
		6-097549						
		6-097548						
4647	FK005	6-097553			0933			
		6-097552						
		6-097551						
4684	FK006	6-097556			0935			
		6-097555						
		6-097554						
4891	FK007	6-097559	6-00426		0937			
		6-097558						
		6-097557						
4859	FK008	6-097562			0939			
		6-097561						
		6-097560						

Carol a Geraghty

Odessa Drum Recyclers

TO6-9103-26

Thurs 5-9-91

Samplers: Vana Henry, Gary Dry, Carol Geraghty

Drum Number	RAS Sample Number	EPA TAG	COC Number	Date	Time	C/G	P	QA/QC
4499	FK009	6-097565	6-00426	5/8/91	0941	G	NO	
		6-097564						
		6-097563						
4507	FK010	6-097568			0943			
		6-097567						
		6-097566						
4705	FK011	6-097571			0945			
		6-097570						
		6-097569						
4783	FK012	6-097647			0947			
		6-097649						
		6-097650						
4837	FK013	6-097645	6-00429		0949			
		6-097646						
		6-097648						
4453	FK014	6-097700			0951			Dup
		6-097643						Dup
		6-097644						Dup
4518	FK015	6-097694			0953			NO
		6-097695						
		6-097696						
4603	FK016	6-097697			0955			
		6-097698						
		6-097699						
4252	FK017	6-097692			0850			
		6-097691						
		6-097693						
4393	FK018	6-097658			0853			
		6-097690						
		6-097689						

Carol A. Geraghty

Odessa Drum Recyclers

T06-9103-26 — Thurs 5-9-91 — Samplers: Vera Henry, Gary Dry, Carol Geraghty

Drum Number	RAS Sample Number	EPA TAG	COC Number	Date	Time	46	F	QA/QC	TDC Drum Nos.
4199	FK019	6-097655	6-00425	5/8/91	0855	6	ND	NO	435
		6-097656							
		6-097657							
4248	FK020	6-097654			0857				413
		6-097653							
		6-097652							
4117	FK021	6-097689			0900				143
		6-097687							Sa
		6-097686							
4431	FK022	6-097685			0903				
		6-097684							
		6-097683							
4408	FK023	6-097682			0905				
		6-097681							
		6-097680							
4163	FK024	6-097679			0907				
		6-097678							
		6-097677							
4340	FK025	6-097676	6-00424		0909			DUP	1510
		6-097675						DUP	
		6-097674						DUP	
4202	FK026	6-097673			0911			NO	
		6-097672							
		6-097671							
4138	FK027	6-097670			913				
		6-097669							
		6-097668							
4159	FK028	6-097667			0915			DUP	
		6-097666						DUP	
		6-097665						DUP	

Carol A Geraghty

Odessa Drum Recyclers

TO6-9103-26 — Thurs 5-9-91 — 9

Samplers: Vera Henry, Gary Dry, Carol Gaughty

Drum Number	RAS Sample Number	EPA TAG	COC Number	Date	Time	C/G	F	QA/QC
4354	FK029	6-097664	6-00424	5/8/91	0917	G	NO	NO
		6-097663						NO
		6-097662						NO
4133	FK030	6-097661			0923			DUP
		6-097660						DUP
		6-097659						DUP

1430 TAT, completed paperwork for organic sample shipment.

For Organic Analyses:

5 coolers each containing 6-8oz + 12-4oz samples (1-8oz + 2-4oz per drum) will be shipped to the following CLP lab for extractable and volatile organics:

Case # 16392

Environmental Industrial Research
Suite 100
161 James Drive West
St. Rose, LA 70087
Attn: Cynthia Albert

P 1510 The master airbill # is 285312185 4
P with the following subnumbers: 2 of 5 836276250 2,
P 3 of 5 836276251 1, 4 of 5 836276252 7 and
5 of 5 836276253 6. Samples were shipped in
5 coolers as follows:
1- FK001 thru FK006, COC # 6-00427
2- FK007 thru FK012, COC # 6-00426
3- FK013 thru FK018, COC # 6-00429
4- FK019 thru FK024, COC # 6-00425
P 5- FK025 thru FK030, COC # 6-00424
P Copies of RAS traffic reports and SAS packing slips
P were sent to Blake Hanke in Alexandria, VA (airbill
9068642881 and Myra Perez in Houston, Tx (airbill
9068642892.

Carol A Gaughty

Odessa Drum Recyclers

TDG-9103-26 Thurs 5-9-91

1600 TATS return to site from FedEx office and prepare to collect drum label information from the 30 drums sampled this week. ——— Con

1620 TATS enter hot zone to collect drum information

1700 TATS return from hot zone with drum label information - See below.

✓ Drum 4891 - Dynamit Nobel Chemicals
Product of West Germany
Caustic Potash

✓ Drum 4882 - Omega
Demulsifier
7888-1-1

✓ Drum 4859 - SRS Specialty Research + Sales, Inc
20 West Industrial Loop
Midland, Tx
Water Treatment
Compound Liquid
Corrosive Material

✓ Drum 4837 - CLATROL

✓ Drum 4783 - Exxon Chemical
Curexit, AC1744

✓ Drum 4684 - BJ Hughes

✓ Drum 4705 - Petrolite, Petrotec, K-430W
369 Marshall Avenue
St. Louis, MO

✓ Drum 4647 - Petrolite, tretolite

✓ Drum 4620 - (Omega, Demulsifier 793,
Chemicals Inc

Carol A Geraghty

Odessa Drum Recycling

T06-9103 Thurs 5-9-91

Drum 4431 - Unidyne
Lot 626, 6448, T-88, N-410

Drum 4393 Champion Chemicals
EMUSI-CHEK-6575
B.421 8/85
Flammable Liq NOS UN 1993

Drum 4133, 4138 Champion Chemicals, Inc.

Drum 4159 - BJ Hughes
Flammable Liq NOS, UN 1993
P.O. Box 442, Houston, Tx 77210
713-351-8131

Drum 4163 - champion Chemicals, Flammable Liq

Drum 4199 - Van Waters + Rogers
Sodium Silicate Soln
division of UNIVER
San Mateo, CA 94403

Drum 4603 - Specialty Research + Sales Inc
20 West Industrial Loop
Midland, Tx
CHEK, G556, Phillips Special
Flammable Liquid UN 1255

Drum 4202 - Nalco-Visco-4921
Corrosive Inhibitor. For use in high temp. CO_2 Environments in producing oil + gas wells. 4921 can also be used in some sulfide environments
Dosage - 20ppm to 100ppm
Nalco Chemical Co. P.O. Box 87 Sugarland, Tx

Drum 4252 - Texas Refinery Corp. Executive offices - C Group. Fort Worth, Toronto - M TRC

Carol A Geraghty

20

Odessa Drum Recycles

T06-9103-26 Thurs 5-9-91

Drum 4408 - Unidyne-35 - Lot 626 - C group
6-448 T-38-N-410
53503

✓ Drum 4453 - BJ Hughes R-12-L, BJ Hughes Inc.
A subsidiary of Hughes Tool Company

✓ Drum 4499 ~~Chemcat~~ CO 5-9-91
ChemLink Petroleum, Inc.
1500 Market Street P.O. Box 7258
Philadelphia, Pennsylvania 19101
Business phone 215 557-2229
Emergency phone 800-424-9300
215-353-8300
OFC
highly Flammable (warning label contains aromatic Petroleum oil)

✓ Drum 4507 - DI-CHEM (painted)
ARMCO / National Chemicals (paper)
— Company division of Armco, Inc.
Flammable liquid sticker

✓ Drum 4518 S.R.S, Specialty Research + Sales, Inc.
20 West Industrial Loop
Midland, Texas
P.O. Box 5713 Flammable liquid sticker
915 685-1341

✓ Drum 4593 Dynamit — Chemicals
Caust —
Other info unreadable

✓ Drum 4622 - Omega Treating chemicals, Inc.
2500 W. Francis, P.O. Box 4383
Midland, Texas 79701
(915) 683-3312 • (409) 779-1203
flammable liquid label
Demulsifier 700/206

Carol A Scoggins

Odessa Drum Recyclers

T06-9103-24 Thurs 5-9-91

Drum 4248 - Omega Treating Chemicals, Inc.
Corrosive liquid label
O-144, B-1547, Net 55 gal

Drum 4340 - Corexit Chemicals
7672 Oil Field Bactericide
Exxon Chemicals a division of Exxon Chemical Company
Exxon Chemical American
Houston, Texas 77001
active ingredients: n-alkyl-1,3-propyline Diamines
Glacial Acetic Acid
Isopropyl alcohol
Warnings - corrosive + flammable
NRD } painted on drum
7-7672 B.1018 }

Drum 4354 - DSP Chemicals, Inc } painted on drum
DSR-55 B 793

1710 JATs prepare the van for transportation back to Dallas.

(Late Entry)
Drum 4117 - HC --EST 263
Hydrochem
100 Industrial Ave Box 3627
Odessa, Texas

T06-9103-26 Mon June 10 1991

1500 TAT Ehresmann onsite. Waiting for Winnek drillers. TAT scouting drilling locations.
1640 S. Hughes PD relates to TAT Ehresmann that two extra samples: mark one MS and the other MSD on COC. Take 3 samples from 1 well. TAT went to Thermal Scientific to buy chemicals to preserve water samples.
1730 TAT Ehresmann offsite.

D Ehresmann

T06
0700
sec
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115
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8

T06-9103-26 Tue June 11 1991

0700 TAT Ehresmann onsite, TAT learns from security guard that Winnek arrived last night at 2000 hours.

Winnek onsite consists:

Don Clements Supervisor
Nathan Clements helper
Tim Fife Driller
Terry Fraser Driller
Eddy Lancaster Driller
Geo, Guin helper

TAT conducts safety meeting with Winnek crew. Be aware of heat stress, no smoking around rig. Possible chemicals onsite: benzene, toluene, xylene, lead, etc. (see site assessment SSP). Stay 25' from power lines, avoid overhead obstructions, be aware of heavy equipment operated by Reibel Be aware of uneven terrain. Air monitoring action level for level C is 5ppm VOC units

David Ehresmann PM David Ehresmann

weather: cool cloudy, calm, temp 65°F.

800 Winnek crew setting up rig, on forest to the north well. Will use split spoons and then core barrel to begin.

840 Crew begining to use split spoons, Gas Co. on site locating gas lines, will locate line for drill crew before sampling begins. Jr. Carrilla from Energas searching for line.

905 Winnek starting to split spoon sample. Jr Carrilla states that drillers should not have any problem with gas lines, line has been

D Ehresmann

22

24

T06-9103-26 Tue June 11 1991

T06-9103

PHOTOGRAPH LOG

CAMERA/LENS(MODEL) 35mm Nikon / 50mm Lens
SERIAL # 7248241

TIME	SQ/PR#	ROLL#	DIR	SUBJECT	P/U
1130	1	1	W	drill rig w/ cone barrel	DJE
1130	2	1	~~S~~		DJE
1140	3	1	D	sample 2-4'	DJE
1140	4	1	D	sample 12'-14'	DJE
1445	5	1	W	drilling w/ casing	DJE
1051	6	1	W	drilling w/ HNu	DJE

INS
(& PROBE,

HNu (
Explos
Water l

shut off f
914 Winnel
0-6' a f
according
& foot
count 1
1000 10'-1
gr. Cle
water (
set 10-
consolid
~~1040~~ 1021 12'-1
1020 Cle

10 br

8'

while

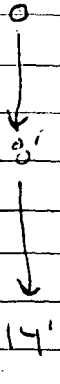
14'

TOG-9103-26 Tue June 11 1991

INSTRUMENT LOG

INSTRUMENT (& PROBE, IF APPLIES)	MODEL & SERIAL#	CALIB DATE	INST. LOG	BACK-GRND	NAME	
HNu (10.2eV)	197308	6/7/91	✓	0 ppm	DOE	
Explosimeter	TATL			—	DOE	
Water level indicator	724883	—	—	—	DOE	

shut off for a period of time.
924 Winnek pulled 1st 6 foot of split spoon: 0-6' a fine-med gr br sand. Split spoon wet according to Clements, Blow count on first 8 foot of sample approx. 5-6, 8-10' blow count 15.
1000 10'-12' sample while cemented Ss fine-med gr. Clements explains that if they hit water (2/3 gal/min) they will have to set 10-12' of surface casing. At 10' hit consolidated Sandstone.
~~1010~~ 1020 12'-14' same as above.
1020 Clements reports refusal at 13½ feet.



D Ehresman

TOG-9103 26 Tue June 11 1991

1025 Crew going to Core barrel at 13½ to 14 feet.

1050 Crew changing to core barrel, decanning core barrel w/ steam pressure wash.

1100 TAT C. Quina, C. Franklin onsite.

1215 Crew pulling core barrel.

1220 Crew brings core barrel sample out of hole. Only 3'6" of core out of hole total depth is 13½" to 17'. HNu readings, no readings above background.

13½'
white, fine-med gr calcium carbonate material, highly fractured.
↓ w/ large carbonate chucks, w/ clay lenses,
17

1230 Crew at lunch, TAT crew at lunch.

1330 Crew, TAT back from lunch. Crew OK using core barrel. OK

Crew using 7 7/8" bit to widen hole for surface casing.

1440 Casing in place (15' section) using core barrel to sample. OSC Fife onsite at 1330.

1447 Crew beginning to use Core barrel at 21.5'.

HNu Table

Date	time	HNu readings
6/11/91	1500	0 HNu 6/11/91 HNu readings
6/11/91	1530	0 HNu readings
6/11/91	1600	0 HNu readings
6/11/91	1630	0 HNu readings
6/11/91	1700	0 HNu readings
6/11/91	1730	0 HNu readings

T06-9103-26 Tue June 11 1991

1505 Explosimeter battery dead. Will bring new one tomorrow.

1541 Continue coring.

1600 Pulling core barrel from hole.

1605 Core barrel pulled from hole interval: 21.5' to 29.5', 6 feet recovered from barrel.

1615

21.5'

white to lt color fine-med gr limestone.

29.5'

1620 Driller in hole with bit to ream hole before using core barrel.

1630 Driller putting core barrel in hole. Starting at: 29½'

1650 Coring hole. TAT taking HNu readings every ½ hour.

1740 Crew pulling core from hole. No HNu readings as coring out of hole/

1750 pulled core barrel interval 29.5' to 39.5' recovered 5' 2"

29.5'

34-35 is contact zone; uppermost is a Sandstone/ clast, then moves into a fractured Ss, sand is fine gr, subangular to angular with clay lenses

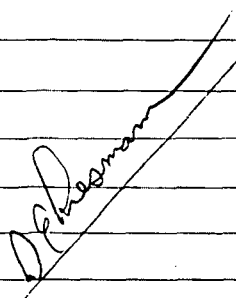
39.5'

D Ehasz

T06-9103-20 T-e June 11 1991

1300 Crew decon and cleaned up and left site.

1830 TATs Ehresmann, Quinn, and Franklin offsite.



TO6 9103-26 Wed June 12 1991

0700 TAT Ehresmann, Quina onsite. Winek crew consists of Don Clements, Nathan Clements, Tim Fife and Geo. Guin. TAT preparing equipment at CP to take back to well location.

730 TAT Quina conducts safety meeting. TAT Ehresmann conducts safety

SITE SAFETY/ WORK PLAN MEETING

TIME: 0730 WEATHER: CLEAR / cool 75°F

PROPOSED WORK/SAFETY TOPICS:

(1) Avoid Drill Rig / tools
(2) Trip / fall
(3) Heat Stress
(4) Wear safety boots / gloves / hard hats.
(5) Do not approach drill rig while derrick is turning.

SIGNATURE	PRINT NAME	DUTIES/AFFIL.
David Ehresmann	David Ehresmann	SSO TL
Ammad Anan Ahmad	Anan Hammad	

CONDUCTED BY: Chris Quina - SSO CHRIS QUINA

meeting with the Winek crew. Same topics as 6/11/91.

740 TAT and Winek measure water level in hole with water level indicator. approx. 1' of water is in the hole.

800 Winek begins to core barrel the hole with 5' sections. Begin at 29.5'. TAT will put HNu by rig to monitor for air.

C Ehresmann

TCG-9103-26 6/12/91

PHOTOGRAPH LOG

CAMERA/LENS(MODEL)
SERIAL #

TIME	SQ/FR#	ROLL#	DIR	SUBJECT	P/W
1000	1	2	E	drilling to core	CQ/DOE
1000	2		W	drill rig	CQ/DOE
1000	3	9	W	Speedstar drill rig	CQ/DOE
1020	4		E	putting core barrel on	CQ/DOE
1020	5	11	D	5 7/8" rock bit	CQ/DOE
1020	6		S	core barrel	CQ/DOE
1023	7	13	E	core in core barrel	CQ/DOE
1047	8	11-14	D	core from 49.5 - 54.5	CQ/DOE
1150	9		E	diamond core bit	CQ/DOE
1545	10		W	setting up on #2	DOE/CQ
1549	11		N	setting up on #2	DOE/CQ
1358	12		W	setting up on #2	

815 Winnek using rock bit to clear hole before core barrelling.
0832 Winnek coring hole interval 39.5' - 49.5'
0930 Core out of hole interval of recovery 44.5' to 49.5'. Driller Clements relates that water may be produced at a interval between 39.5' to 49.5'. Could not recover the core above 44.5'. Encountered a hard layer at approx. 44.5'. Driller having difficulty ~~drill~~ coring hole to due soft nature of sand. Sand is moist.

39.5' ~~44.5'~~
fine gr. bs sand
44.5 fine gr cemented bs sand
49.5' Fine gr bs sand

D. Glassman

TOG-9103-26 6/12/91

Hnu Log

TIME	PI Units	DATE
0830	0	6/12/91
0900	0	6/12/91
0930	0	6/12/91
1000	0	6/12/91
1030	0	6/12/91
1100	0	6/12/91
1130	0	6/12/91

0835 Crew on break, will wait and test water level in well.
0950 TAT and crew measure water level, approx 1 foot of water in well.
0955 Crew begins to core at 49.5'.
1003 M. LaPierre onsite.
1020 Core barrel out of hole. Interval: 49.5' to 54.5' recover 4.3'

49.5'
↓ fine gr lt. br sand w/ a gravel stringer, fractured, certain intervals med-coarse gr.
54.5'

1030 0 HNu readings on core, Crew beginning to core at 54.5'.
1130 Crew taking core barrel out of the hole.
1215 Crew, TAT on lunch break.
1315 Crew, TAT back from lunch. Crew breaking

D Eberman

T06-9103-26 Wed June 12 1991

down core barrel.

1345 Water level indicator gives approx 2-3' of water in well. TATs Ehresmann and Quinn discuss with Clements the problems of core barrel sampling. Will go to 4 3/4" rock bit to go to a water zone.

1400 Crew using rock bit to open hole from 49.5' to 59.5'.

LATE ENTRY Core sample taken from 54.5' to 59.9'

54.5'

fine-med gr lt br Ss w/ fractures and Fe staining.

59.5

1430 Clements reports rig at 70' w/ 4 3/4" rock bit.

1445 TAT Quinn tells clements to open hole to 100' w/ 4 3/4" rock bit.

1500 TAT collects gravel sample at 95'.

1515 Crew shuts down hole at 100'. Will leave hole overnight to see if water moves into it.

time	HN_M units	date
1330	0	6/12
1400	0	6/12
1500	0	6/12

1530 TATs and Tim Fife select locations

D Ehresmann

T06-9103-26 Wed June 12 1991

number 2, just of CP.

1540 Geo Guin and Tim Fife setting rig up for hole # 2, rig Speedstar SS15TT.

1700 Clements setting and working on rig, MECHANICAL Problem with the rig, have not made any hole.

1730 TAT Ehresmann calls Roy Burson

1840 Clements states air valve on compressor did not work. He thinks the problem is fixed now. Winnek begins drilling hole #2 w/ 6 7/8" bit.

1850 Crew cutting 9' piece of SCH 40 6" PVC to use as casing. According to Fife; silt to 4½' weathered to 7' more competent to 9'.

Photo Log

time	SQ	Roll	Dir	Subject	P/L
1700	1	3	W	crew preparing drill stem	AH/DJE
1910	2	3	W	hole opening	AH/DJE

1900 TAT taking HNu readings on hole opening

time	HNu units
1900	0
1930	0

D Ehresmann

TOG-9103-26 Wed June 12 1991.

1910 Crew into limestone unit due to white dust coming out of hole.

1915 Crew brings up cuttings at 9-12' and 12-15'.

Crew using 5 7/8" bit to make hole.

4'
| limey sand
12'
| limey sand
15'

1925 sample 15-20' taken.

15'
| white limey sand
20'

1940 Cutting from 20-25' taken.

20'
| white limey sand
25'

1740 Crew pulling bit out of hole.

~~1850~~ DJE 6/12/91

2000 TAT and crew offsite.

D. Eisenman

106-9103-26 Thur 13 June 1991

700 TAT's Ehresmann and Quinn onsite, Winnek crew: Don Clements, Tim Fik, Geo. Quinn, and Na Clements.

SITE SAFETY/ WORK PLAN REVIEW:
TIME: 700 WEATHER: 75°F, partly cloudy,
PROPOSED WORK/SAFETY TOPICS:
Maintain Hnu & Explosimeter readings 1/2 hour intervals. Do not approach drill rig while Kelly is turning. Minimum distance 5-6'. Attempt to take readings while Kelly is idle.

SIGNATURE	PRINT NAME	DUTIES/AFFIL.
David Ehresmann	David Ehresmann	SSO → TL

REVIEWED BY: Chris Quinn CHRIS QUINN - SSO.

730 TAT, crew measure water level in well #1, approx. 3' of water in well. TD of well 100'.

745 Subject of annual space discussed with Don Clements. Winnek did not bring 6 1/4 OD 6 1/4 bit to put in case (8") to use 6 1/4" bit to ensure 2".

750 Called Roy Burson discussed problem. He stated that a 5 5/8" bit with 1" run-out will give a 2" annular space with using 2" ID PVC well casing. Told him I will call Arlington to Contact office.

800 Called Debbie Kopsick she stated that if they can deliver 2" annular

D. Ehresmann

TOG-9103-26 Thur June 13 1991

PHOTOGRAPH LOG

CAMERA/LENS(MODEL) Nikon 35mm / 50mm lens
SERIAL # 7249847

TIME	SQ/FR#	ROLL#	DIR	SUBJECT	P/W
1119	3	3	W	Drill rig - hole #1	CR
1330	4	3	S	Crew putting PVC	DJE
1330	5	3	E	in hole	DJE
1335	6	3	E	adding sand pack	DJE
1415	7	3	E	adding tremie pipe	DJE
1440	8	3	E	adding bentonite	DJE
1440	9		E	adding water to hydrate pellets	DJE
1525	10		W	position of Explosimeter	DJE
1525	11		W	position of H/V	DJE
~~1525~~					
1655	12		W	drilling & laying PVC out	DJE

space then let them use 5 5/8" bit. Debbie will call Roy Burson to discuss issue.
915 Debbie Kopsick called and stated that if they can deliver 2" annular space with 5 3/8" bit and 1" runout it is out, but they want sand pack and grout the well accurately. Chris Quinn talks to Debbie Kopsick.
930 Called Roy Burson and discussed issue with him. According to Arlington office it is ok to go ahead with 5 5/8" bit. Informed him that we might drop one well.
940 Winnek using 5 7/8" to ream hole to 100' on first location.

D Eberman

T06-9103-26 Thur June 13, 1991

1000 OSC Fike onsite, TAT and OSC measure water level in water well in the "old chicken bldg" on east edge of site by Judy St. Water level at approx ~100'.

1100 TAT and OSC record the name of A. Piervincenti 7222 Maurene, green house just north of the site. They have a well just north of the site that EPA and TAT want to investigate.

1105 Winnek at 120' in well #1 report just moist sand. Will drill another 10' and break ~~for~~ for lunch.

1115 Checked with Don? of Winnek. Well #1 producing ~ 5-10 gpm at 120' total depth Decided to drill additional 5' and set screen from 125 - 105.

1125 Checked immediate drilling area w/ HNU - readings all 0.

1130 Head driller informed TAT Quinn that 20 gallons of water injected to clean out hole. Water still free flowing from formation.

1130 Begin tripping out of hole in preparation to set casing.

1200 TAT, crew on lunch break.

1300 TAT, crew back from lunch.

1315 Crew deconning PVC w/ hot steam cleaner

1330 Crew putting 20' of screen followed by 130' of PVC in hole. Bottom of screen had a centralizer.

1335 Well bottom at 124' due to debris in hole, screen from 124' to 104'

1340 Crew adding 12-28 sand as gravel pack around 10 thousand slot screen.

D Ekossm

TO6-9103-26 Thur June 13 1991

1340 Crew adding 2nd bag of sand.
1415 Crew ~~has~~ been down due to no ~~tape~~ tape measure to add sand pack. Will use trie pipe instead. Clements states water level at 102' (static level) will add sand pack to 100', then bentonite to 97.5' (2½ feet 100' to 97.5')
1431 Crew taking trie out. Sand pack in place.
1435 Crew adding bentonite pellets to hole. Seal at 97.5'. Bentonite seal 2½" thick.
1440 Adding 10-15 gals of water to hydrate pellets.
1450 Crew moving to location #2. Will cement well tomorrow.
1500 Crew setting-up one location #2. Crew has decon'd bit (5⅞"), changed truck and preparing to drill.
Late entry! Crew used ½ bucket of bentonite pellets on well #1.
1515 Crew drilling well #2, begin at 25' with 5⅞" bit. TAT air monitoring with HNu and explosimeter.
1538 Crew at 45'.
1548 TAT collects cuttings.

27'
↓ white limey sand
30'
↓ br sand w/ ~~peas~~ pebble-cobble size particles subround, fine Qz sand
35'
↓ ~~br sand w/ pebble cobble size particles~~ subround, fine Qz sand
40

D. Elias[illegible]

TOG-7103-26 Thur June 13 1991

Instrument log

Instrument	serial #	calib date	background	time
explosimeter	696779	6/7/91	0 @ adjust	DJE
HNu	197308	6/7/91	0 @ adjust	DJE

Air Monitoring

HNu units	Explosimeter	time
0	no reading 0% LEL 20.9% O_2	1515
0	0% LEL ; 20.9% O_2	1530
0	0% LEL ; 20.9% O_2	1600
0	0% LEL ; 20.9% O_2	1630
0	0% LEL ; 20.9% O_2	1700
0	0% LEL ; 20.9% O_2	1730
0	0% LEL ; 20.9% O_2	1800
0	0% LEL ; 20.9% O_2	1330

~~PK~~ DJE 6/13/91

D. Thurman

T06-9103-26 Thur June 13 1991

1605 Driller Guinn reports that he feels he hit a small amount of water at 63', currently he is at 64'.

LATE ENTRY Chris Quinn offsite at 1330.

LATE ENTRY Lithology change at approximately 30 feet. (see log on 38).

1640 Driller Fife stakes at 87', TAT collects cuttings.

40'
↓ fine gr br sand, moist
45'
↓ fine gr br sand, moist
50'

1650 TAT collects cuttings

50' ~~gravelly br sand, moist~~
↓
55'
↓ fine gr br sand, moist
60'
↓ ~~gravel layer~~, moist, br sand w/ pebble & cobbles
70'
↓ br sand w/ pebble & cobbles moist
80'
↓ br sand w/ pebble & cobbles
85'

D Gherman

TOB-9103-26 Thur June 13, 1991

Photo Log

time	SQ	Roll	Dir	subject	PW
1710	13		E	screen w/ centralizer	DJE
1710	14		E	showing slots	DJE
1830	15		W	water blowing out of hole at 121'	DJE
1830	16		W		
1830	17			steam cleaning PVC	DJE
1847	18		W	loosing drill stem (ie unpin tape)	DJE
1920	19		W	crew putting in casing	DJE
1925	20		S	crew adding sand pack	DJE
1940	21		S	crew adding bentonite	DJE

1735 TAT collects cuttings.

85
↓ fine gr brown sand w/ cobble & pebble, moist
95

94
↓ br gravel
105

↓ fine gr brown sand
117

1800 TAT Ehresmann and Clements fill water tank for rig.

1825 Driller Fife at 121' will stop, appears there is enough formation water.

1837 Tripping out of hole.

1900 Bit out of hole.

D. Ehresmann

TOG-9103-26 Thur June 13 1991

1915 TAT, crew measure water level w/ indicator at 91', TD=121', 30' of water in well. Will screen bottom 20'. Fite stakes water most likely began at 108'.

1920 Crew putting screen and PVC into well #2. Clements stakes hole is really 124' deep. TAT directs drillers to set screen (20') at 120' to 100'.

~~S~~ DSE 6/13/91

1925 Crew adding sand pack (12.28). Sand will be from hole bottom to 2' above screen (98'). Crew used 4½ bags of sand on Well #1. Crew used 5 bags of sand on Well #2.

1943 Crew adding bentonite pellets to well ontop of sand pack at 98'. Using UK Baroid ½" bentonite pellets.

1947 Crew finished adding 2½' of bentonite to 95.5'. Did not need to add water to hydrate since poured into water. Sand is 12.28 washed, has been cleaned.

2000 Crew, TAT offsite after securing and decanning equipment.

D Clements

T06-9103-26 Thur June 13 1991

700 TAT Ehresmann onsite. Crew onsite: Don Clements, Jim Fife, Geo. Guinn, N. Clements. Crew filling steam cleaner tank.

SITE SAFETY/ WORK PLAN MEETING

TIME: 710 WEATHER: ~~wet, cool, 75°, calm wind~~

PROPOSED WORK/SAFETY TOPICS:

- be aware of ~~heat~~ stress
- ~~stay~~ away from rig
- wear hard hat

SIGNATURE	PRINT NAME	DUTIES/AFFIL.
David Ehresmann	David Ehresmann	SSO TL

CONDUCTED BY: David Ehresmann

Equipment onsite: Landa steam cleaner (4124AS OK)
Ford pickup (2ND 949 OK)
Ford 4x4 pickup (2TT 4271 Montana)
(480cfm) 427 — Gardner Denver 500
hammer (~~750cfm~~ 250~~cfm~~) Speedstar SS15II (135 05TT OK)
(750cfm=25xpsi)

730 Roy Burson calls TAT Ehresmann gives an estimate of the 2 holes at $13,600. Needs to know if we want a 4th well. Crew preparing to cement well #1

800 Currently it is raining. Cement using is Portland I-II neat grout (no gravel). 1 bag of ~~Aquagel~~ (bentonite).

D Ehresmann

42

44

TOC-9103-26 Fri June 14 1991

805 Crew mixing cement for hole #1.
817 Crew using trie line to put cement in well #1
820 Crew finishes 1st cement batch, 4 to 5 gal/min into well.
830 Crew pulling trie line. Crew pulling temp. surface casing (sch 40 6" PVC casing).
837 Crew preparing 2nd batch of cement.
845 Crew adding 2nd batch of cement to hole.
855 Crew preparing 3rd batch of cement.
900 Crew adding 3rd batch to well.
D Clements states cement needs to settle out, cement going into formation. Crew deconning rig and trie pipe, will move over to well #2 to begin cementing operations. Crew used 13 100 lb. bags of cement and 50 lbs of bentonite w/ 160 gals of water on well #1 so far.
905 Crew deconning trie.
930 Crew Guinn and Fife preparing well #2 for cementing. N. Clements filling water tank (325 gal). D. Clements went for more cement.
1000 D Clements back with cement. N. Clements with water at well. Crew preparing to cement well #2 Clements has 20 bag of Portland type I cement.
1015 Crew setting up cementing operations.

D Clements

T06-9103-26 Fri June 14 1991

PHOTOGRAPH LOG

CAMERA/LENS(MODEL) 35mm Nikon / 50mm lens
SERIAL # 7241884

TIME	CQ/FR#	ROLL#	DIR	SUBJECT	J/H
809	22		W	crew mixing cement	DJE
812	23		E	" " "	DJE
820	1	4	E	cementing well #1	DJE
830	2		E	pulling temp } surface casing	DJE
830	3		E		
830	4		S	hole w/ PVC	DJE
840	5		S	bag of cement	DJE
905	6		S	decon trie	DJE
1030	7		W	crew mixing cement	DJE
1050	8		W	adding trie to well #2	DJE
1110	9		W	pulling temp } casing	DJE
1110	10		W		
1120	11		S	installing wall protector	DJE
1130	12		N	decon surface casing	DJE
1310	13		W	decon ing } rig	DJE
1310	14		W		
1310	15		W	well protector	DJE
1330	16		N	setting-up #3	DJE
1330	17		S	" " "	DJE
1430	18		Down	7 7/8" bit	DJE
1430	19		N	drilling #3	DJE
1500	20		S	drill rig showing position of HWA and Explos.	DJE
1615	21		N	drill rig at 91'	DJE
1615	22		S	2" PVC w/ Centralizer	DJE
1810	23		N	adding PVC to #3	DJE
1818	24		W	adding sand pack	DJE
1830	25		W	crew adding bentonite	DJE

Eklessman

TAB-9103-26 Fri June 14, 1991

1030 Crew mixing 1st batch of cement for well #2.
1040 Crew pumping cement into hole.
1050 Crew preparing 2nd batch of cement.
Crew pumping 2nd batch into well #2.
Clements stakes they use 5% bentonite in cement mix to make the cement more plastic. If they did not use bentonite the cement would dehydrate and tend to move into the formation. Bentonite hydrates and expands and tends to lock the cement in place.
1100 Crew pumping 2nd batch into well.
1110 Crew pulling surface casing from well #2. Crew used 13 bags of cement on well #2.
1115 Crew installing well protector on #2.
1120 Crew deconning drive pipe, F.E. tearing rig down on hole #2. Crew deconning surface casing.
1200 TAT, crew on lunch break. Vera Henry on site.
1300 TAT, crew back from lunch.
Crew deconning rig.
1315 Crew done deconning, moving to well location #3.
1325 Crew setting rig on well location #3.
1340 Crew drilling w/ 7 7/8" bit at well location #3.
1400 Crew preparing to put in temp. surface casing. TAT air monitoring while drilling going on.

TD6-9103-26 Fri June 14, 1991

INSTRUMENT LOG

INSTRUMENT (PROBE, IF APPLIES)	MODEL & SERIAL#	CALIB DATE	IN LOG	[illegible]	[illegible]
HNU	197308	6/7/91	✓	0 Adj by SC	DJE
Explosimeter	696779	6/7/91	✓	0 Adj SC	DJE

Air Monitoring

HNu units/Explosimeter	time	date
0 ; 0% LEL ; 20 % O_2	1330	6/14/91
0 ; 0% LEL ; 20.9% O_2	1400	6/14/91
0 ; 0% LEL ; 20.9% O_2	1430	6/14/91
0 ; 0% LEL ; 20.9% O_2	1500	6/14/91
0 ; 0% LEL ; 20.9% O_2	1530	6/14/91
0 ; 0% LEL ; 20.9% O_2	1600	6/14/91
0 ; 0% LEL 20.9% O_2	1630	6/14/91
0 ; 0% LEL 20.9% O_2	1700	6/14/91

T06-9103-26 Fri June 14, 1991

1430 Crew drilling #3 w/ 5 7/8" b.t."
1530 Crew at 61' TD in well # 3.
1600 Crew at 91' depth in well #3.
1639 Driller Fife reports water at 109' currently at 114' will finish hole at 120'.
1700 well # 3 at 120' will drill to 125'.
1715 Well #3 at 125' will stop and begin to trip out of well.
1722 Crew stops work because of storm in area.
1745 Crew pulling drill stem from hole Storm over.
1800 Drill stem out of hole.
1810 Crew adding PVC to well #3. Total depth 125' will set screen at 125' to 105', sand pack from 125' to 100'. Crew measures water level at 100', 25' of water in well. Clements inspects well total depth really is 124'. Set screen at 124' to 104'.
1817 Crew adding sand pack.
1830 Crew added sand pack (12.28) to 99'. Now adding bentonite pellets. Crew added 4½ bags of sand. Sand pack total is 25' thick.
1840 Crew adds 5 gal of water to hydrate pellets.
1900 Crew decon rig, secure hole. T&Ts Ehresmann and Henry offsite. Seemily guard onsite.

D Ehresmann

D413

ecology and environment, inc.

International Specialists in the Environment

Job Number ZT1061/ETX1120SA

Site Investigation
Odessa Drum Recyclers
Odessa, Ector County, Texas

E & E Job Number 2T1061

Telephone Code Number

Site Name Odessa Drum

City/State Odessa, Texas

TDD T06-9103-26

PAN ETX1120SA

SSID Z2

Start / Finish Date 6/15/91 / 6/17/91

Book 2 of 3

E & E Emergency Response Center: (716) 684-8940
E & E Corporate Center: (716) 684-8060
MEDTOX Hotline: (501) 370-8263
E & E Safety Director (Home): (716) 655-1260

06-9103-26 Sat 15 June 1991

0700 TAT Ehresmann, Vera onsite. Crew onsite:
D Clements, N. Clements, G. Guinn, T. Fife.

SITE SAFETY/WORK PLAN MEETING

TIME: 700 WEATHER: cool, clear, 70°F, winds calm

PROPOSED WORK/SAFETY TOPICS:

- be aware of heat stress
- stay away from rig, wear hard hat
- be aware of uneven terrain

SIGNATURE		DUTIES/AFFIL.
David C Ehresmann	David Ehresmann	CSO
Vera E Henry	Vera Henry	TL

CONDUCTED BY: David C Ehresmann

715 Crew filling water tank. Preparing to wash down large drill rig.
745 Crew decon'ing smaller rig on back property.
815 Crew preparing to develop well #3.
830 Clements has to leave for tubing

INSTRUMENT LOG

INSTRUMENT (& PROBE, IF APPLIES)	MODEL & SERIAL#	CALIB DATE	INST. LOG	BACK-GRND	NAME
Water Quality Meter	197385				DSE

to develop the well.
D Ehresmann

06-9103-26 Sat 15 June 1991

PHOTOGRAPH LOG

CAMERA/LENS (MODEL) Nikon 35mm / 50mm lens
SERIAL # 7248864

TIME	SQ/FR#	ROLL#	DIR	SUBJECT	P/W
820	26		N	U-shaped air lift system	DJE
1043	27		SW	Air Lift System	DJE
1048	28		SW	water out of line	DJE
1100	29		W	1st water bottle sample	DJE
1140	30		W	1st water sample 40 mins later	DJE
1150	31		W	Concrete pad installation	VHH
1151	32		W	guard post installation	VHH
1425	33		W	crew fixing well #1 pad	DJE
1425	34		E		
1455	35		E	remaing casing from #3	DJE
1455	36		E		
1510	1	5	W	well #2	DJE
1520	2		W	putting 1" PVC in well to develop	DJE
1620	3		NA	Initial water sample pulled from #2	DJE
1730	4		D	last water samples #2	DJE
1745	5		E	crew building pad and post #3	DJE

D Ehresman

06-9103-26 Sat 15 June 1991

920 Clements back from store.

930 Crew adding 1" PVC and 3/8" tubing into well #3 to develop it. Tube will handle 100 psi. File records that cement settled to 11½' on W1 and 6'½' on W2 overnight. Clements states crew used a total of 14 bags of sand on wells.

940 Clements using Denver Gardner rig to develop well #3.

945 Small amount of water leaving hose, Clements using 100 psi.

1000 Clements using different air lift system, will blow air down 1" and bring water out in the annuls of the 2" PVC.

1015 Clements believes vacuum was 20'-25' from bottom. He reset U-shaped lift system 6" from bottom. Currently he has 80 psi at hose.

1030 AirLift system producing ½ gal/min according to field test.

1035 Clements calls Burson and will try a different air lift system.

1040 Clements blows air down 1" line and water comes up annulus in 2" PVC, producing 2 gt/min. (½ g-1/min).

1100 TAT Ehresmann and Henry began pH and cond, temp, salinity measurements during well development:

pH	conductivity	temp	salinity	time
6½	1000 µmhos	24°C	.5 ‰	1100
6	890 µmhos	23.5°C	.5 ‰	1115
7	890 µmhos	24°C	.5‰	1130
6½	800 µmhos	24°C	.5‰	1145
6½	780 µmhos	23°C	.5 ‰	1200
7	750 µmhos	23.5°C	.5 ‰	1215

D. Ehresmann

06-9103-26 Sat 15 June 1991

1150 Fife, Guinn, and N. Clements finish topping cement off in well #3 install concrete pad and guard posts.

1200 Crew on lunch break. TAT Ehresmann continuing to monitor well development.

pH	conductivity	temp	salinity	time
7	700 µmhos	24°C	.3‰	1230
7	702 µmhos	24°C	.3‰	1245
6.5	700 µmhos	23.5°C	.3‰	1300
7	600 ~~680~~ µmhos 6/14/91	24°C	.25‰	1315
7	700 µmhos	24.5°C	.25‰	1330
7	610 µmhos	24.5°C	.25‰	1345
7	570 µmhos	24.7°C	.25‰	1400
7	600 µmhos	25°C	.25‰	1415

1300 TAT continuing well monitor development. Crew took 1 hour lunch break. TAT Hering and Ehresmann took 1/2 hour lunch breaks.

1350 Well producing approx 1 pint per minute.

1355 Crew has completed well #2, pad and protector are installed.

1425 Crew (N. Clements, Guinn) building pad and protectors on well #1. Pads are 3' x 3' x 4".

1430 Well #3 developed, D. Clements and Fife pulling air lift system and will move to location #2.

1440 Crew pulling surface casing on well #3.

1455 Crew finished with pulling casing on #3.

1510 Crew (N. Clements and Fife) reconning 1" trie PVC to use in well #2 development.

1520 Crew beginning to install air lift system

DEhresmann

06-9103.26 Sat June 15 1991

in well #2 to begin well development.
1530 Crew using air lift system to development #2. Water coming out of well system, using 12 psi. Well producing 1 pint per 15 sec. or 2 qt/min.
1600 Crew preparing to cement well # 3.
1615 TAT Ehresmann pulling water samples to mon. for well development.
1710 Clements reports that well #3 is cemented and starting to build a pad.

pH	conductivity	temp	salinity	time
7	680 µmhos	27°C	.3 °/oo	1615
7	640 µmhos	26.5°C	.3 °/oo	1630
7	610 µmhos	27°C	.3 °/oo	1645
7	620 µmhos	27°C	.3 °/oo	1700
7	600 µmhos	27°C	.3 °/oo	1715
7	610 µmhos	26.5°C	.3 °/oo	1730

1730 well # 2 is developed, Crew building pad and security posts around # 3 well. 13 bags of cement used on well # 3.
D. Clements and Fife will pull 1" PVC from # 2.
1800 Crew will begin to develop well # 1.
1820 Clements reports well # 1 is running water for development. Crew finishing pad on well # 3.
1900 Crew decanning equipment, have finished pad and posts on well # 3
1915 Crew, TAT offsite, security guard onsite.

D Ehresmann

06-9103-26 Sun June 16 1991

0700 TAT Ehresmann and Henry onsite. Drill crew onsite: D Clements, V. Clements, G. Guinn, T. Fife.

SITE SAFETY/ WORK PLAN MEETING

TIME: 713 WEATHER: clear, 70°F, calm winds

PROPOSED WORK/SAFETY TOPICS:

- be aware of heat stress
- be aware of uneven terrain
- wear hard hat onsite

SIGNATURE	PRINT NAME	DUTIES/AFFIL.
Vera Henry	Vera R Henry	SSO
David Ehresmann	David Ehresmann	TL

CONDUCTED BY: David Ehresmann

715 Crew packing supplies and double bagging trash. Clements reports well #1 running water for development

730 V. Henry packing TAT supplies for taking to hotel to be secure while TAT offsite

750 D Ehresmann turns on well onsite to allow it to purge.

800 TAT Ehresmann preparing to sample Well #1 for development

pH	cond.	temp.	salinity	time
7	2800 µmhos	24°C	1.5 °/oo	815
7	2950 µmhos	25°C	1.7 °/oo	830
7	2800 µmhos	26°C	1.7 °/oo	845
7	2800 µmhos	27°C	1.7 °/oo	900

DEhresmann

06-9103-26 Sun June 16 1991

INSTRUMENT LOG

INSTRUMENT (& PROBE, IF APPLIES)	MODEL & SERIAL#	CALIB. DATE	INST. LOG	BACK-GRND	INIT.
Water Quality meter	197385	-	-	-	DJE
Water Depth Indicator.					

820 Clements reports well #1 making 1 pint/40 secs.

825 Crew decanning water depth indicator with hot water rinse.

900 well developed #1. Will put in bailers. Crew ~~decanning~~ bailer ~~for~~ well #1.

915 TAT Ehresmann analyzing well #4 for sampling.

pH	cond.	temp.	salinity	time
7	2100 μmhos	25°C	1‰	915
7	2200 μmhos	26°C	1.2‰	940
7	2200 μmhos	26°C	1.2‰	955

924 TAT, crew taking static level in well #6.
Static level at 102'6". Well vol =
$(3.14)(.0833)^2(22.5)(7.48) = 3.7$ gal
3 well vols = 11.1 gal
1 gal = 320s (5 min 20s) per gal
3 gal = 15 mins = 3 well vols = 1 hr.

937 Crew begins purging wells.
D. Ehresmann

06-9103-26 Sun June 16 1991

PHOTOGRAPHY LOG

CAMERA/LENS(MODEL) 35mm/lens 50mm

SERIAL #

TIME	SQ/FILE	ROLL#	DIR	SUBJECT	B/W
810	6		E	#1 developing	DJE
820	7		W	1st water sample #1	DJE
1050	8		E	crew adding bailer #1	DJE
1220	9		E	crew adding bailer #2	DJE
1520	10		W	bailering well #3	DJE
1520	11		W		
1540	12		E	well #3 secured	DJE

D Ehresman

TOG-9103-26 Sun June 16 1991

940 Fife and Guinn installing cap to secure bailer on Well #2.

1000 TAT begins sampling Well #4 in warehouse. TAT takes 2 80oz ambers, 2 1l polys, and 3 VOAs. See sampling logbook for details.

1050 Crew placing bailer in well #1. Guinn will decon 1" PVC before purging well #2.

1:00 D Clements reports that static level in #3 is 102.8 (top of casing), ground level is 101'. Well #2 static level is 101.5 (104'6") ground level is 98.4'.

#2 21.6' of standing water,

#3 23.0' of standing water

1130 TAT takes well sample #1. Same as above. See separate logbook. Guinn reports well #2 began purging at 1124. Fife reports it is making 1 gal / 4 mins.

Well #2

$$(3.14)(.0833)^2(21.5)(7.48) = 3.5 \text{ gal}$$

$$3 \times \text{vol} = 10.5 \text{ gal}$$

1140 Well #1 done, 1209 PM purging on #2 will be done. It will take 40-45 minutes to purge 3 well volumes from #2

1215 Crew pulling air lift system from #2, preparing to place in bailer, deconning rope and bailer.

1300 TAT sample well #2. see above information for samples. Fife reports that well #3 making 1 pint / 30 sec, began pumping at 1247.

D Thesman

T06-9107-26 Sun June 16 1991

well Vol = (3.14)(.0833)^2(23)(7.48) = 3.75 gal

3 well Vols = 11.25 gal

1 pint/30 sec = 2 pints/1 min
Qt/1 min
1 gal/4 min

Well needs to pump for ~45 min to purge.
LATE ENTRY TAT took samples W-5 (MS) and W-6 (MSD) from well #2 also.
1505 Crew pulling 1" PVC from #3, will start to sample #3.
1545 TAT collects sample from well #3.
1620 Crew offsite. Job completed by drillers, well secured.
TATs Ehresmann and Ilenry will pack samples for shipment, will also pack TAT equipment to take to hotel for storage.
1800 TAT leaves for Holiday Inn to store equipment.
1825 TAT arrives at Holiday Inn.
1845 TAT departs Holiday Inn for hotel.
1900 TAT arrives at Hilton.

D Ehresmann

12

TOG 9103-26 Mon June 17 1991

700 TAT & Ehresmann and Henry arrive at site. Begin to load samples into car to take at Fed Ex.

730 Drillers arrive to pick-up equipment.

745 Drillers offsite.

800 TAT takes samples to Fed Ex in Midland.

900 TAT arrives at Fed Ex to send samples

945 TAT Ehresmann drops Henry off at airport for flight back to Dallas.

1030 TAT Ehresmann arrives at OIC site to pick up 2nd load of equipment to take to Fed Ex office in Midland.

1045 TAT Ehresmann arrives at Fed Ex in Midland

1120 TAT Ehresmann arrives at airport for flight back to Dallas.

D Ehresman

D Ehresman

Attachment P

Copies of TDD# T06-9103-26 and Amendments A,B,C,D,E,F,G

1A. Cost Center: ZT1061

1B. Account No.: ETX1120SA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T06-9103-26

Amendment ____

3A. Priority: ☒ High ☐ Medium ☐ Low

4A. Estimate of Total Hours: (b) (4) ~~60~~ JCP

Total Costs: #11000

5A. EPA Site Name: Odessa Drum Co.

5B. SSID No.: 22

5C. City / County / State: Odessa, Ector, Tx

7. CERCLIS ID: TXD008122254

8A. Completion Date: 6/20/91

3B. Key EPA Contact:
Name: FIFE
Phone: 2275

4B. Overtime Approved: ☒ Yes ☐ No

6. Source of Funds: ☐ Other ____
☒ CERCLA
☐ OPA
☐ UST

8B. Reference Info: ☒ Yes ☐ Attached ☐ No ☒ Pick-up

9. Type of Activity:

OPA	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Corp. Special Project	☐ Program Management
	☐ On-Site Monitoring	☐ Preparedness	☐ Technical Assistance
		☐ UST	☐ Information Management
		☐ FEMA	

10. General Task Description: Sample and arrange for analyses (full scan) of drummed material at Odessa Drum Co.

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

12. Specific Elements:
1) Prepare QASP
2) Sample the 30 drums which have been identified by the OSC.
3) Arrange for analyses including
- Volatiles
- Semi Vol
- metals
- pesticides
- RCRA Characteristics

13. Interim Deadlines:
1) 4/2/91
2) 4/8/91

14. Authorizing DPO: J Chris Peterson
Signature

15. Date: 4/1/91

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
TATL Signature

17. Date: 4/1/91

Distributions:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Designated by TATL)

00270.PM2

Henry

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Greg Fite

Address Dallas, EPA

Phone 214 - 655-2275
(Area Code) (Number)

Date 5 / 10 / 91
(Mo) (Day) (Year)

Time 07:47 (AM)/PM

[ ] Originator Placed Call

[ ] Originator Received Call

TDD# T06-910326 PAN# E7X112054

Subject Odessa House to TDD

Discussion: TAT informed RSC Fite that the hours and date of completion on the TDD for the site assessment at Odessa Shores would have to be increased. The hours on the TDD will be increased to 600 hrs and the date extended to July 3.

Follow-Up Action:

Originator's Signature: Vera R. Henry

(RVG 6/90)

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

1A. Cost Center: [illegible]

1B. Account No.: [illegible]

2. No.: T T06-9103-26

Amendment A

3A. Priority
☒ High
☐ Medium
☐ Low

4A. Estimate of Total Hours:
To[redacted]sts: $34,000

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: [illegible]

5B. SSID No.:

5C. City / County / State: Odessa/Ector/TX

8A. Completion Date: 7/3/91

3B. Key EPA Contact:
Name: Fife
Phone: X 2275

4B. Overtime Approved:
☒ Yes
☐ No

6. Source of Funds:
☒ CERCLA
☐ OPA
☐ UST
☐ Other

8B. Reference Info:
☒ Yes ☐ Attached
☐ No ☒ Pick-up

9. Type of Activity:

OPA
☐ SPCC
☐ On-Scene Monitoring
☐ Spill Clean-up Funded

CERCLA
☒ Site Assessment
☐ Removal Funded
☐ Removal PRP (AO/CO)
☐ On-Site Monitoring

AS SPECIFIED ABOVE
☐ Special Project
☐ Analytical Project
☐ Corp. Special Project
☐ Preparedness
☐ UST
☐ FEMA
☐ Quality Assurance
☐ Training
☐ Program Management
☐ Technical Assistance
☐ Information Management

10. General Task Description:
Sample and arrange for analyses (full scan) of drummed material at Odessa Drum Company

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

12. Specific Elements:

TDD amended for additional hours, costs and extension of completion date.

Original Specific Elements:

1) Prepare QASP

2) Sample the 30 drums which have been identified by the OSC

3) Arrange for analyses including:

- o Volatiles
- o Semi-volatiles
- o Metals
- o RCRA characteristics

13. Interim Deadlines: N/A

14. Authorizing DPO: Chris Peterson
Signature

15. Date: 5/10/91

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
TATL Signature

17. Date: 5/13/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Unsigned by TATL)

Original's Signature: Henry

00270.PM3

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATIONS

Conversation with:

Name Greg Fife

Address

Odessa, TX

Phone 915 - 367-3045
(Area Code) (Number)

Date 6 / 5 / 91
(Mo) (Day) (Year)

Time 8:15 (AM)/PM

[X] Originator Placed Call

[ ] Originator Received Call

TDD# T06-9103-26A PAN# ETX1120S.1A

Subject Extension of Hours on Site Assessment TDD.

Discussion: TAT informed OSC Fife that an additional 160 hours will be needed to add to the TDD in order to finish the drilling, data validation and site assessment report. Fife said that this would be fine.

Follow-Up-Action: TAT submitted paperwork to amend the TDD.

Originator's Signature: Vera R Henry

(RWG 6/90)

1A. Cost Center: ZT1061

1B. Account No.: ETK1120SA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T T06-9103-26
Amendment 3

3A. Priority: [X] High [ ] Medium [ ] Low

4A. Estimate of Total Hours: (b) (4)
Total Costs: $68,400

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: TXD00812254

5B. SSID No.: Z2

5C. City / County / State: Odessa/Ector/TX

8A. Completion Date: 7/3/91

3B. Key EPA Contact:
Name: Fife
Phone: X 2275

4B. Overtime Approved: [X] Yes [ ] No

6. Source of Funds: [ ] Other
[X] CERCLA
[ ] OPA
[ ] UST

8B. Reference Info: [ ] Yes [ ] Attached [X] No [ ] Pick-up

9. Type of Activity:

OPA
- [ ] SPCC
- [ ] On-Scene Monitoring
- [ ] Spill Clean-up Funded

CERCLA
- [X] Site Assessment
- [ ] Removal Funded
- [ ] Removal PRP (AO/CO)
- [ ] On-Site Monitoring

AS SPECIFIED ABOVE
- [ ] Special Project
- [ ] Analytical Project
- [ ] Corp. Special Project
- [ ] Preparedness
- [ ] UST
- [ ] FEMA
- [ ] Quality Assurance
- [ ] Training
- [ ] Program Management
- [ ] Technical Assistance
- [ ] Information Management

10. General Task Description: ~~Sample and arrange for analyses~~ (full scan) of drummed material at Odessa Drum Company

11. Desired Report Form:
[X] Formal Report
[ ] Letter Report
[ ] Formal Briefing
[ ] Other (Specify)

12. Specific Elements:

TDD amended for additional hours, costs and extension of ~~completion date.~~

Original Specific Elements:

1) Prepare QASP

2) Sample the 30 drums which have been identified by the OSC

3) Arrange for analyses including:
   - o Volatiles
   - o Semi-volatiles
   - o Metals
   - o RCRA characteristics

13. Interim Deadlines: N/A

14. Authorizing DPO: J Chris Peterson
Signature

15. Date: 6/5/91

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
Richard Smith
TATL Signature

17. Date: 6/5/91

Distribution: Sheet 1 White - DPO Copy; Sheet 2 Blue - TATL Copy; Sheet 3 Green - ZPM Copy; Sheet 4 Canary - PO Copy; Sheet 5 Pink - GO Copy; Sheet 6 Goldenrod - DPO Original Transmitting TATL

Vera Renée Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Conversation with:

Name Gregg Fife

Address Dallas, EPA

Phone 214 - 655-2275
(Area Code) (Number)

Date 6 / 19 / 91
(Mo) (Day) (Year)

Time 11:00 (AM)/PM

[X] Originator Placed Call

[ ] Originator Received Call

TDD# T06-9103-26 PAN# ETX112CSA

Subject Amendment of TDD

Discussion: TAT informed R.S.C. Fife that the current due date of 7/3/91 would not be able to be met because all of the results of analyses wouldn't be received from the Sampling Management Office before the end of July. Results probably will be received by the second week of July. Fife said that this was O.K. and that we could extend the due date to the second week of August.

Follow-Up-Action: TAT completed the necessary paperwork to amend the TDD.

Originator's Signature: Vera Renée Henry

(RWG 6/90)

1A. Cost Center: ZT1061

1B. Account No.: ETX1120SA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T T06-9103-26 C
Amendment ____

3A. Priority
☒ High
☐ Medium
☐ Low

4A. Estimate of Total Hours: (b) (4)
Total Costs: $68,400

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: TXD00812254

5B. SSID No.: 32

5C. City / County / State: Odessa/Ector/TX

8A. Completion Date: 3/9/91

3B. Key EPA Contact:
Name: Fife
Phone: X 2275

4B. Overtime Approved:
☒ Yes
☐ No

6. Source of Funds:
☐ Other ____
☒ CERCLA
☐ OPA
☐ UST

8B. Reference Info:
☐ Yes ☐ Attached
☒ No ☐ Pick-up

9. Type of Activity:

OPA	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Corp. Special Project	☐ Program Management
	☐ On-Site Monitoring	☐ Preparedness	☐ Technical Assistance
		☐ UST	☐ Information Management
		☐ FEMA	

10. General Task Description: Sample and arrange for analyses (full scan) of drummed material at Odessa Drum Company

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

12. Specific Elements:
TDD amended for additional hours, costs and extension of completion date.
~~Original Specific Elements:~~
1) Prepare QASP
2) Sample the 30 drums which have been identified by the OSC
3) Arrange for analyses including:
   - o Volatiles
   - o Semi-volatiles
   - o Metals
   - o ~~RCRA characteristics~~
4) Make arrangements to drill three ground water monitoring wells
5) Procure a laboratory to test ground water for priority pollutants
6) ~~Sample monitoring wells~~
7) Validate data

13. Interim Deadlines:

14. Authorizing DPO: Henry Thompson Jr. Signature

15. Date: 6/21/91

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
Kathy Smith TATL Signature

17. Date: 6/24/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Unsigned by TATL)

00270.PM3

Originator's Signature: Henry

Vera R Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Conversation with:

Name Hank Thompson
Address Dallas, EPA
Phone 214 - 655-2275
(Area Code) (Number)

Date 7 / 10 / 91
(Mo) (Day) (Year)
Time 1350 AM/PM
[ ] Originator Placed Call
[X] Originator Received Call

TDD# TDG-9103-X PAN# ETX1120SA

Subject Lab Results for Odessa Drum

Discussion: Thompson spoke with Myra Levy in Houston EPA Lab office concerning the status of inorganic and organic analyses of samples sent from Odessa Drum. She stated that the inorganic samples should be shipped by Friday. Organic samples that were screened and found to be low concentration were due in the Houston office in 10 days and would be shipped to us when Houston office received them. Organic samples that were screened as high had just been received by the Houston office and we should receive them in this week. The results of low concentration samples will not be received until mid-August.

Follow-Up-Action: TAT will amend TDD for later date since samples won't be received until mid August.

Originator's Signature: Vera R Henry

(RWG 6/90)

Vera R Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Conversation with:

Name Gregg Fife
Address EPA, Dallas

Phone 915 - 367-3045
(Area Code) (Number)

Date 7 / 10 / 91
(Mo) (Day) (Year)
Time 1425 AM/PM
[X] Originator Placed Call
[ ] Originator Received Call

TDD# TX-9103-26C PAN# ETX1120SAA

Subject Amending TDD

Discussion: TAT told OSC Fife about the conversation with Hank Thompson concerning lab results. A complete set of data will not be received until the second or third week of August therefore, the report due date will need to be extended. Additional hours are also needed to assess data and complete the final report. TAT requested that a completion date near the end of September would be appropriate. The OSC agreed.

Follow-Up-Action: TAT will amend TDD for hours and extend the date.

Originator's Signature: Vera R Henry

(RWG 6/90)

1A. Cost Center: ZT1061

1B. Account No.: ETK1120SA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T T06-9103-26 D
Amendment ____

3A. Priority
- [X] High
- [ ] Medium
- [ ] Low

4A. Estimate of Tot(b) (4)s:
Total Costs: $79,200

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: TXD00812254

5B. SSID No.: Z2

5C. City / County / State: Odessa/Ector/TX

8A. Completion Date: 9/30/91

3B. Key EPA Contact:
Name: Fite
Phone: X 2275

4B. Overtime Approved:
- [X] Yes
- [ ] No

6. Source of Funds:
- [X] CERCLA
- [ ] OPA
- [ ] UST
- [ ] Other ____

8B. Reference Info:
- [ ] Yes [ ] Attached
- [X] No [ ] Pick-up

9. Type of Activity:

OPA	CERCLA	AS SPECIFIED ABOVE	
[ ] SPCC	[X] Site Assessment	[ ] Special Project	[ ] Quality Assurance
[ ] On-Scene Monitoring	[ ] Removal Funded	[ ] Analytical Project	[ ] Training
[ ] Spill Clean-up Funded	[ ] Removal PRP (AO/CO)	[ ] Corp. Special Project	[ ] Program Management
	[ ] On-Site Monitoring	[ ] Preparedness	[ ] Technical Assistance
		[ ] UST	[ ] Information Management
		[ ] FEMA	

10. General Task Description: Sample and arrange for analyses (full scan) of drummed material and arrange to install and sample ground water monitoring wells at Odessa Drum Company.

11. Desired Report Form:
- [X] Formal Report
- [ ] Letter Report
- [ ] Formal Briefing
- [ ] Other (Specify)

12. Specific Elements:
TDD amended for additional hours, costs and extension of completion date.
Original Specific Elements:
1) Prepare QASP
2) Sample the 30 drums which have been identified by the OSC
3) Arrange for analyses including:
   - o Volatiles
   - o Semi-volatiles
   - o Metals
   - o RCRA characteristics
4) Make arrangements to drill three ground water monitoring wells
5) Procure a laboratory to test ground water for priority pollutants
6) Sample monitoring wells
7) Review and validate data
8) Prepare a final report

13. Interim Deadlines: N/A

14. Authorizing DPO: Henry Thompson Jr. (Signature)

15. Date: 8/1/91

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
for K. F.
TATL Signature

17. Date: 8/2/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PDO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Gold - DPO Copy

00270.PMD

Henry

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATIONS

Conversation with:

Name Greg Fife

Address EPA - Dallas

Phone 817 - 655-2275
(Area Code) (Number)

Date 9 / 24 / 91
(Mo) (Day) (Year)

Time 8:45 (AM)/PM

[X] Originator Placed Call

[ ] Originator Received Call

T06-9103-26 ETX1120FA

TDD# T06-9010-011 PAN# ETX1620SA

Subject Amending TDDs

Discussion: TAT Henry told GF Fife that the completion date on the site assessment TDD and the removal TDD needed to be extended. He said this would be fine.

Follow-Up-Action: TAT extending completion dates on both TDDs.

Originator's Signature: Vera L Henry

(RWG 6/90)

1A. Cost Center: ET1061

1B. Account No.: ETK1120SA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T06-9103-26
T
E
Amendment ____

3A. Priority
- [X] High
- [ ] Medium
- [ ] Low

4A. Estimate of Total Hours: (b) (4)
Total Costs: $79,200

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: TXD00312254

5B. SSID No.: Z2

5C. City / County / State: Odessa/Ector/TX

8A. Completion Date: 10/30/91

3B. Key EPA Contact:
Name: Fife
Phone: X 2275

4B. Overtime Approved:
- [X] Yes
- [ ] No

6. Source of Funds:
- [X] CERCLA
- [ ] OPA
- [ ] UST
- [ ] CEPP ____
- [ ] Other ____

8B. Reference Info:
- [ ] Yes [ ] Attached
- [X] No [ ] Pick-up

9. Type of Activity:

OPA
- [ ] SPCC
- [ ] On-Scene Monitoring
- [ ] Spill Clean-up Funded

CERCLA
- [X] Site Assessment
- [ ] Removal Funded
- [ ] Removal PRP (AO/CO)
- [ ] On-Site Monitoring

AS SPECIFIED ABOVE
- [ ] Special Project
- [ ] Analytical Project
- [ ] Corp. Special Project
- [ ] Preparedness
- [ ] UST
- [ ] FEMA
- [ ] Quality Assurance
- [ ] Training
- [ ] Program Management
- [ ] Technical Assistance
- [ ] Information Management

10. General Task Description: ~~Sample and arrange for analyses~~ (full scan) of drummed material and arrange to install and sample ground water monitoring ~~wells at Odessa Drum Company.~~

11. Desired Report Form:
- [X] Formal Report
- [ ] Letter Report
- [ ] Formal Briefing
- [ ] Other (Specify)

12. Specific Elements:
TDD amended for extension of completion date.
Original Specific Elements:
1) Prepare QASP
2) Sample the 30 drums which have been identified by the OSC
3) Arrange for analyses including:
   - o Volatiles
   - o ~~Semi-volatiles~~
   - o Metals
   - o RCRA characteristics
4) ~~Make arrangements to drill three ground water~~ monitoring wells
5) ~~Procure a laboratory to test ground water for~~ priority pollutants
6) Sample monitoring wells
7) ~~Review and validate data~~
8) Prepare a final report

13. Interim Deadlines: N/A

14. Authorizing DPO: Henry Thompson Jr. Signature

15. Date: 10/1/91

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
Kristen Smith
TATL Signature

17. Date: 10/3/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Unsigned by TATL)

00270.PM3

Henry

Vera R. Henry
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATIONS

Conversation with:

Name Greg Fife

Address EPA Dallas

Phone ______ - ______

(Area Code) (Number)

Date 10 / ___ / 91
(Mo) (Day) (Year)

Time 1:30 AM/PM (PM circled)

[ ] Originator Placed Call

[ ] Originator Received Call

TDD# T06-9103-36 PAN# ETX1A30SA and ETX1...

Subject Amendment of TDDs

Discussion: TAT Henry saw OSC Fife at the West Dallas Lead Command post and ~~informed~~ told him that both TDD's for the Odessa Drum Site would have to be amended because of work at West Dallas Lead. Because I had been working on the West Dallas Project I did not have time to work the the Odessa Drum Site.

Follow-Up-Action:

Originator's Signature: Vera R Henry

(RWG 6/90)

TAT ZONE II CONTRACT
CONTRACT NO. ~~XXXXXXXXXX~~ 68-W0-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

1A. Cost Center:	ZT1061
1B. Account No.:	ETX1120SA
2. No.:	T06-9103-26
Amendment	F

3A. Priority	[X] High [ ] Medium [ ] Low
4A. Estimate of Total Hours:	[redacted]
Total Costs:	$73,200
5A. EPA Site Name:	Odessa Drum Company
7. CERCLIS ID:	TXD00812254
5B. SSID No.:	Z2
5C. City/County/State:	Odessa/Ector/TX
8. Completion Date:	12/30/91
3B. Key EPA Contact:	Name: Fife; Phone: X 2275
4B. Overtime Approved:	[X] Yes [ ] No
4C. Nondedicated Approved:	[ ] Yes [ ] No
6. Source of Funds:	[X] CERCLA [ ] 311 [ ] UST [ ] Other
8A. Reference Info:	[ ] Yes [X] No [ ] Attached [ ] Pick-up

9. Type of Activity:

CWA-311	CERCLA	AS SPECIFIED ABOVE	
[ ] SPCC	[X] Site Assessment	[ ] Special Project	[ ] Quality Assurance
[ ] On-Scene Monitoring	[ ] Removal Funded	[ ] Analytical Project	[ ] Training
[ ] Spill Clean-up Funded	[ ] Removal PRP (AO/CO)	[ ] Preparedness	[ ] Program Management
	[ ] On-Site Monitoring	[ ] UST	[ ] Technical Assistance
		[ ] FEMA	[ ] Information Management

10. General Task Description: Sample and arrange for analyses (full scan) of drummed material ~~and arrange to install and sample ground water monitoring~~ wells at Odessa Drum Company.

11. Desired Report Form: [X] Formal Report [ ] Letter Report [ ] Formal Briefing [ ] Other (Specify)

12. Specific Elements:

TDD amended for extension of completion date.
Original Specific Elements:
1) Prepare QASP
~~2) Sample the 30 drums which have been identified by the OSC~~
3) Arrange for analyses including:
   o Volatiles
   ~~o Semi-volatiles~~
   o Metals
   o RCRA characteristics
~~4) Make arrangements to drill three ground water~~ monitoring wells
5) Procure a laboratory to test ground water for ~~priority pollutants~~
~~6) Sample monitoring wells~~
7) Review and validate data
~~8) Prepare a final report~~

13. Interim Deadlines: N/A

14. Authorizing DPO: [signature] (Signature)

15. Date: 10/28/91

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
[signature] (TATL Signature)

17. Date: 11/1/91

Distribution: Sheet 1: White — DPO Copy; Sheet 2: Blue — TATL Copy; Sheet 3: Green; Sheet 4: Canary; Sheet 5: Pink; Sheet 6: Goldenrod

T007088

1. Cost Center: ZT1061

1B. Account No.: ETX1120SA

TAT ZONE II CONTRACT
CONTRACT NO. [redacted] 68-W0-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T T06-9103-26
Amendment F

3A. Priority: [X] High [ ] Medium [ ] Low

4A. Estimate of Total Hours: (b) (4)
Total Costs: $79,200

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: TXD00812254

5B. SSID No.: Z2

5C. City/County/State: Odessa/Ector/TX

8. Completion Date: 12/30/91

3B. Key EPA Contact: Name: Fife Phone: X 2275

4B. Over-time Approved: [X] Yes [ ] No

4C. Non-dedicated Approved: [ ] Yes [ ] No

6. Source of Funds: [ ] Other _____ [X] CERCLA [ ] 311 [ ] UST

8A. Reference Info: [ ] Yes [ ] Attached [X] No [ ] Pick-up

9. Type of Activity:

CWA-311	CERCLA	AS SPECIFIED ABOVE	
[ ] SPCC	[X] Site Assessment	[ ] Special Project	[ ] Quality Assurance
[ ] On-Scene Monitoring	[ ] Removal Funded	[ ] Analytical Project	[ ] Training
[ ] Spill Clean-up Funded	[ ] Removal PRP (AO/CO)	[ ] Preparedness	[ ] Program Management
	[ ] On-Site Monitoring	[ ] UST	[ ] Technical Assistance
		[ ] FEMA	[ ] Information Management

10. General Task Description: Sample and arrange for analyses (full scan) of drummed material ~~and arrange to install and sample ground water monitoring~~ wells at Odessa Drum Company.

11. Desired Report Form:
[X] Formal Report
[ ] Letter Report
[ ] Formal Briefing
[ ] Other (Specify)

12. Specific Elements:

TDD amended for extension of completion date.
~~Original Specific Elements:~~
1) Prepare QASP
2) Sample the 30 drums which have been identified ~~by the OSC~~
3) Arrange for analyses including:
   - o Volatiles
   - o ~~Semi-volatiles~~
   - o Metals
   - o RCRA characteristics

~~4) Make arrangements to drill three ground water~~ monitoring wells
5) Procure a laboratory to test ground water for ~~priority pollutants~~
6) Sample monitoring wells
7) Review and validate data
~~8)~~ Prepare a final report

13. Interim Deadlines: N/A

14. Authorizing DPO: /s/ Henry Thompson Jr (Signature)

15. Date: 10/28/91

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
Kirkwood (TATL Signature)

17. Date: 11/1/91

1A. Cost Center: ZT1061

1B. Account No.: ETX1120SA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T T069103-26

Amendment G

3A. Priority
- ☒ High
- ☐ Medium
- ☐ Low

4A. Estimate of [redacted] Hours: (b) (4)
Total Costs: $79,200

5A. EPA Site Name: Odessa Drum Company

7. CERCLIS ID: TXD00812254

5B. SSID No.: Z2

5C. City / County / State: Odessa/Ector/TX

8A. Completion Date: 3/13/92

3B. Key EPA Contact:
Name: Fife
Phone: X 2275

4B. Overtime Approved:
- ☒ Yes
- ☐ No

6. Source of Funds:
- ☒ CERCLA
- ☐ OPA
- ☐ UST
- ☐ CEPP
- ☐ Other

8B. Reference Info:
- ☐ Yes ☐ Attached
- ☒ No ☐ Pick-up

9. Type of Activity:

OPA
- ☐ SPCC
- ☐ On-Scene Monitoring
- ☐ Spill Clean-up Funded

CERCLA
- ☒ Site Assessment
- ☐ Removal Funded
- ☐ Removal PRP (AO/CO)
- ☐ On-Site Monitoring

AS SPECIFIED ABOVE
- ☐ Special Project
- ☐ Analytical Project
- ☐ Corp. Special Project
- ☐ Preparedness
- ☐ UST
- ☐ FEMA
- ☐ Quality Assurance
- ☐ Training
- ☐ Program Management
- ☐ Technical Assistance
- ☐ Information Management

10. General Task Description: Sample and arrange for analyses (full scan) of drummed material and arrange to install and sample ground water monitoring wells at Odessa Drum Company.

11. Desired Report Form:
- ☒ Formal Report
- ☐ Letter Report
- ☐ Formal Briefing
- ☐ Other (Specify)

12. Specific Elements:

TDD amended for extension of completion date.

Original Specific Elements:

1) Prepare QASP
2) ~~Sa~~Sample ~~the 30 drums which have been identified by the OSC~~
3) Arrange for analyses including:
   - o Volatiles
   - o Semi-volatiles
   - o Metals
   - o ~~RCRA characteristics~~
4) Make arrangements to drill three ground water monitoring wells
5) Procure a laboratory to test ground water for priority pollutants
6) ~~Sample monitoring wells~~
7) Review and validate data
8) Prepare a final report

13. Interim Deadlines: N/A

14. Authorizing DPO: J Chris Petersen
Signature

15. Date: 12/30/91

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
Kither Smith
TATL Signature

17. Date: 12/30/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Unsigned by TATL)

00270.PM3

Henry (Ed)